

UISCE ÉIREANN

Cork SDS Microbiological Assessment

BW and SFW Assessments



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DOCUMENT RELEASE FORM

UISCE ÉIREANN

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Cork SDS Microbiological Assessment

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SUMMARY

Jacobs and Intertek Metoc (Intertek) have been commissioned by Uisce Éireann to undertake the Cork Strategic Drainage Study, to assess the impact of Uisce Éireann assets on water quality in Cork Harbour. This assessment is a microbiological impact assessment, aiming to evaluate the impact of discharges from all Uisce Éireann assets, and all other known sources, such as rivers, septic tanks and industrial discharges, on the designated Bathing Water and Shellfish Waters (SFWs) in Cork Harbour. Contributions from each source to the impact at the Bathing Water and Shellfish Waters are determined in the assessment, and the most important contributors are identified. Future scenarios with climate change have been undertaken to demonstrate the impact of network changes.

BW

Fountainstown Bathing Water is the only designated Bathing Water in the study area. Across all scenarios (Base, Development, Solution) and time horizons (2030, 2055, 2080), modelled 95th percentile concentrations are around 150 cfu/100ml for EC and 30 cfu/100ml for IE, which is well below the Good classification thresholds of 500 cfu/100ml (for EC) and 200 cfu/100ml (for IE) respectively. There is little variation between Baseline, Development, and Solution scenarios. The only notable difference occurs in the Solution 2080 horizon, where higher predicted concentrations are linked to wetter years included in the model runs, rather than to asset changes. This difference reflects hydrological variation rather than changes in asset operation, with riverine contributions accounting for over 90% of the load at Fountainstown in all scenarios. Source apportionment identifies rivers as the dominant contributor to microbiological impact at Fountainstown, with negligible contribution from wastewater treatment plant discharges, storm water overflows, or industrial discharges.

SFW

The designated SFWs (Rostellan North, Rostellan South, Rostellan West, and North Channel) meet the water quality standards for SFWs with geomean EC concentrations at monitoring points typically less than 3 cfu/100ml and 97th EC percentile concentrations less than 20 cfu/100 ml, compared to targets of 110 cfu/100ml and 1500 cfu/100ml respectively. Rostellan sites show low concentrations, reflecting good flushing and large distance from major sources. North Channel sites consistently record very low predicted concentrations, with limited connectivity from upstream sources due the flow constraints at Belvelly Bridge and higher concentrations from the Owenacurra Estuary moving through East Passage. Performance is driven by strong tidal flushing and large distance from major riverine inputs; the highest concentrations (e.g., 33,000-40,000 cfu/100ml at LE500) occur well outside the designated SFW boundaries. Highest concentrations occur in the Owenacurra Estuary, outside designated SFW boundaries, with the greatest influence from riverine inputs and nearby point sources.

Key Findings

Diffuse riverine inputs are the principal driver of microbiological loads at the Bathing Water and at sensitive points within the harbour. Uisce Éireann asset contributions to monitoring points are generally small, though localised effects are seen near certain wastewater treatment plant discharges. Model results are consistent across scenarios for most locations, indicating stability in predicted water quality performance under current and planned network configurations.

Results are subject to uncertainty arising from: use of less than 10 years' network model data; assumption of constant riverine microbiological concentrations across horizons; and limited representation of private discharges and misconnections beyond those identified. The model indicates sensitivity to high-flow years.

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GLOSSARY

BS

Bathing Season

BW

Bathing Water

BWD

Bathing Water Directive

CLH

Cork Lower Harbour

CMA

Cork Metropolitan Area

DHLGH

Department of Housing, Local Government and Heritage

EC

Escherichia Coli

EPA

Environment Protection Agency

EQS

Environmental Quality Standard

IE

Intestinal Enterococci

MI

Marine Institute

MPN

Most Probable Number

SCRAM

Storm Coastal Risk Assessment Model

SFPA

Sea-Fisheries Protection Authority's

SFW

Shellfish Water

SI

STORM-IMPACT

SWD

Shellfish Water Directive

SWO

Stormwater Overflow

UÉ

Uisce Éireann

UPM

Urban Pollution Management

WFD

Water Framework Directive

WRc

Water Research Council

1. INTRODUCTION AND BACKGROUND

1.1 Background and Purpose of Document

Jacobs and Intertek Metoc (Intertek) have been commissioned by Uisce Éireann to undertake the Cork Strategic Drainage Study. The aim of the Study is to establish a strategy for meeting the water needs of a growing population in the Cork Metropolitan Area (CMA) in the future. This assesses all Uisce Éireann discharges including primary, secondary, and stormwater overflow (SWO) discharges in Cork Harbour against various criteria for a range of environmental legislation and Uisce Éireann policies and targets.

This report relates to the Microbiological Impact Assessment. It presents the current modelled water quality condition at Cork Harbour, predicted utilising a unit-impact assessment approach, and delivered using Intertek's STORM-IMPACT (SI) software. This is the most widely adopted approach in the UK and Ireland. A 'unit impact' technique, originally developed by the Water Research Council (WRC) in the Storm Coastal Risk Assessment Model (SCRAM), and subsequently adopted in the Urban Pollution Management (UPM) Manual v3.1, establishes source-to-receiver relationships under a wide range of environmental conditions supported by the simulation of unit impacts under a large number of model scenarios (unit impact database).

The unit impact database used for SI assessment was generated by running the Cork Harbour coastal model built by Intertek under this study, covering a large number of conditions (different tides, tidal phases, river flows, and wind conditions) and for all discharge locations. The Cork Harbour model was calibrated and validated as described in the model calibration and validation report for hydrodynamics, temperature and salinity (Intertek, 2023). The microbiological (bacteria) water quality of the Cork Harbour model (Intertek, 2023) was also calibrated and validated using a combination of site-specific sampling and available routine monitoring of *Escherichia coli* (EC) and intestinal enterococci (IE) for both the Bathing Water (BW) and Shellfish Waters (SFW).

This assessment aims to provide Uisce Éireann and stakeholders, including in particular the Environment Protection Agency (EPA) with an understanding of the key sources of water quality impacts at Cork Harbour and an estimate of the relative contribution of Uisce Éireann assets to the performance of the BW and SFWs.

1.2 Study Approach

A key objective of the study is the assessment of the impact of all non-continuous discharges from the agglomerations on the designated BW and SFWs. Intermittent spills from SWOs and increased diffuse river loads in wet weather are often important contributing sources to short-term impacts on water quality, which can then influence the longer-term classification with respect to the relevant environmental standards.

To assess all sources including intermittent spills from SWOs and wet-weather diffuse loads is more complex than modelling continuous primary discharges under dry weather conditions. Therefore, for this study, a unit-impact based approach has been applied using Intertek's SI impact assessment tool.

This approach combines network model outputs, river loading data, outputs from hydrology and bacteria runoff models, and coastal model outputs to efficiently model all potential sources and discharge / environmental conditions. This could not be achieved by explicitly modelling all required scenarios and conditions directly with a coastal model.

The technique establishes source to receiver relationships for all potential sources under a range of environmental conditions, for a nominal load (a unit). The unit impacts are then scaled appropriately

by the actual loads from each source under each environmental condition, and summed to obtain the total impact. This approach has become the industry best practice for these studies in the UK.

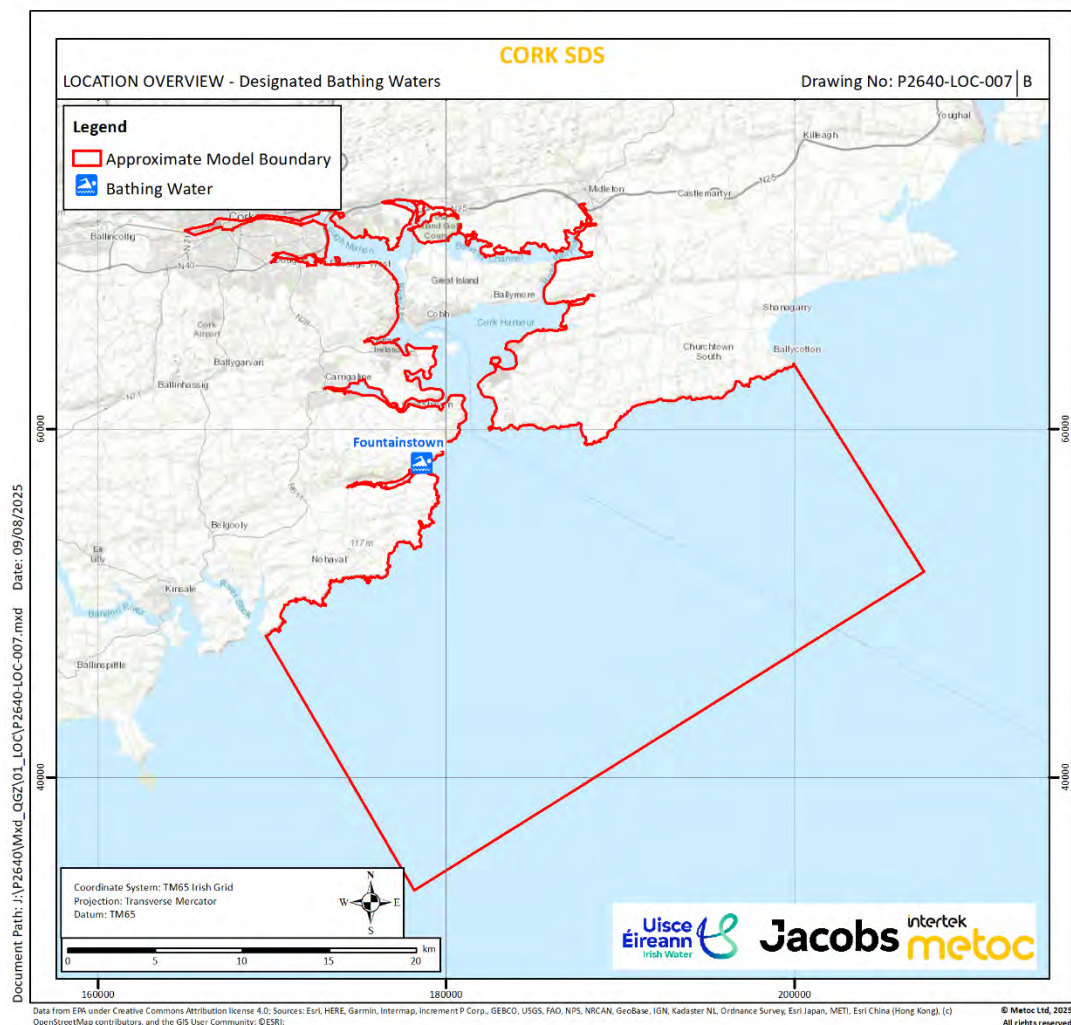
Intertek's SI is an impact assessment software tool which utilises the UPM unit-impact approach, and which has been developed and refined over the last 30 years. It has been widely used in coastal and transitional water assessments for SFW and BW studies in the UK water industry since the late 1990s and has been accepted by the environmental regulators in England, Wales, Scotland and more recently Northern Ireland and Ireland.

1.3 Study Area

Cork Harbour is situated on the coast of County Cork in the South-Western River Basin District. The upper Harbour is characterised by a complex network of interconnected transitional waters, fed by a number of rivers and streams, with the primary riverine inputs being from the Lee, Glashaboy, Owenacurra, Minane, and Owenboy rivers.

The Study Area consists of the entirety of Cork Harbour and the downstream stretches of the river networks drainage to the harbour. An overview of the Study Area is presented in Figure 1-1.

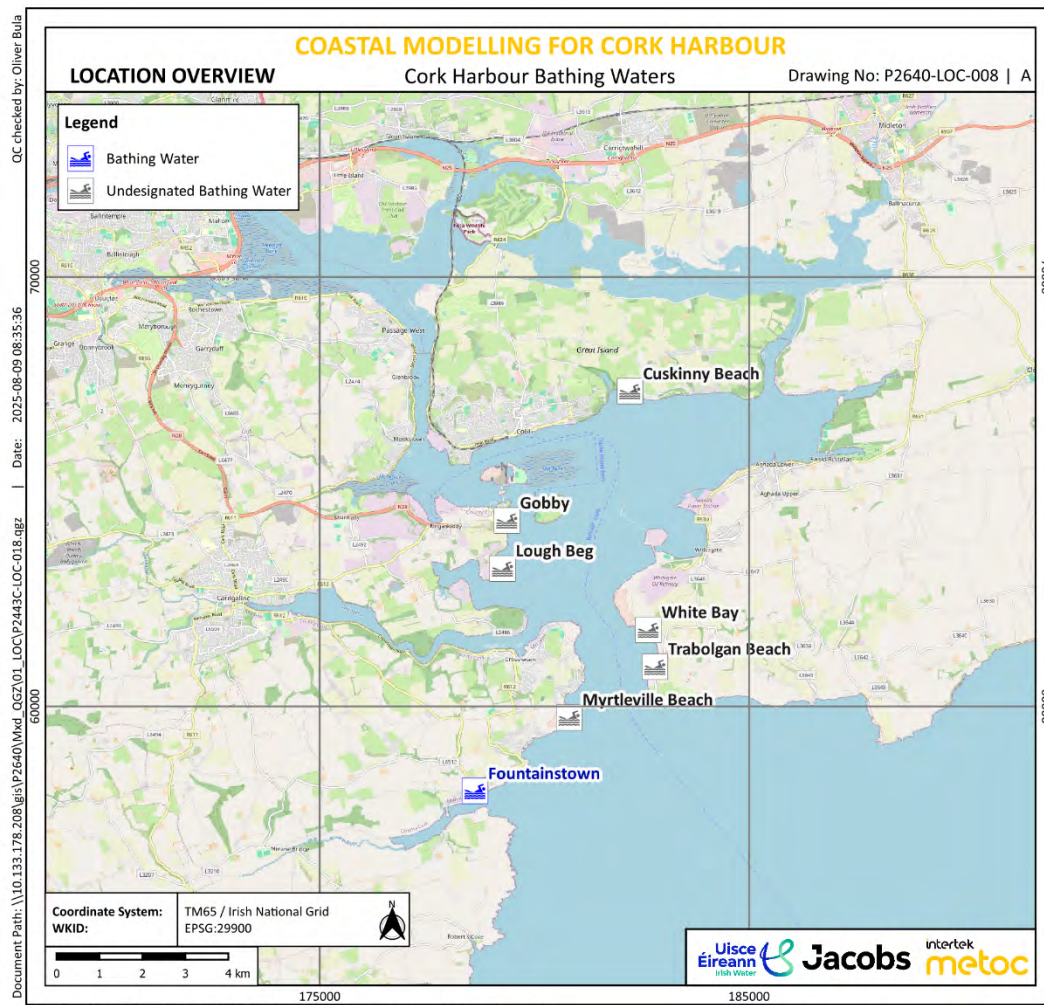
Figure 1-1 Model Area Overview



1.3.2 BWs

Fountainstown is the only Designated Bathing Water in the Cork Harbour study area. There are several non-designated bathing waters within the study area, namely Cuskinny Beach, White Bay/Trabolgan Beach, Myrtleville Beach, and Lough Beg/Gobby Beach, which do not currently have any samples collected. Figure 1-2 shows all BWs in Cork Harbour.

Figure 1-2 Cork Harbour BWs

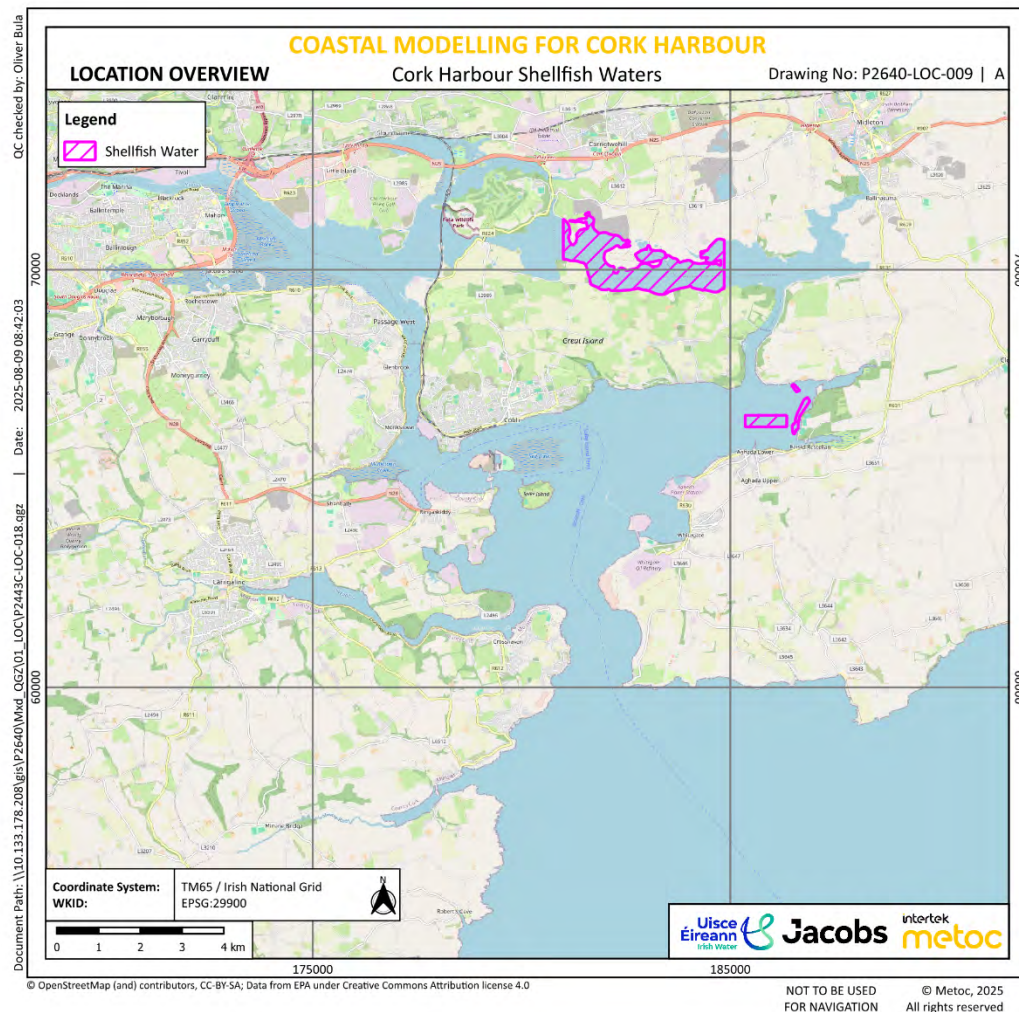


1.3.3 SFWs

There are four designated SFWs in Cork Harbour. These are split into one SFW in Great Island North Channel and three in Rostellan (Rostellan North, Rostellan South, and Rostellan West). Rostellan South has remained dormant, and production is centred in Rostellan North in Jamesbrook. Sampling in Rostellan South ceased in 2019 and commenced in Rostellan North in January 2020.

The SFWs' extents are presented in Figure 1-3.

Figure 1-3 Designated SFWs in Cork Harbour



There are three classified production areas; North Channel West; North Channel East; and Rostellan. The monitoring locations for these production areas are summarised in Table 1-1.

According to the Sea-Fisheries Protection Authority's (SFPA) annual list of production areas (SFPA, 2024¹), Rostellan and Cork Harbour North Channel East were in long term dormancy with no production from these two sites since approximately 2003, and classification monitoring samples were only taken on a quarterly basis. Both sites returned to production during 2020, and classification monitoring samples resumed on a monthly basis. In late 2019, production ceased at Cork Harbour North Channel West, and no stock remains in the area to support a quarterly sampling frequency, so no sampling has occurred in the area since February 2020.

¹ This website provides information for the current year. Information for previous years is accessible via the Internet Archive.

Table 1-1 Cork Harbour Shellfish Classified Production Area Monitoring Locations

Production Site	Production Area	Sampling Point Code	Species	Easting	Northing
Cork Harbour	North Channel West	CK-CH-NW	M. edulis	181631	69964
		CK-CH-NW	C. Gigas	181631	69964
	North Channel East	CK-CH-NE	C. Gigas	182857	70093
	Rostellan	CK-CH-RN	C. Gigas	186689	66309

1.4 Study Scope

The following key activities have been undertaken:

- **Data Review and Collation.** This project builds on previous work undertaken by Uisce Éireann, in which the Cork Harbour model was calibrated and inputs and outputs reviewed. Therefore, only the 10-year sewer network modelling outputs and 10-year rainfall have been updated.
- **Representation of Diffuse River Loads.** As part of the strategic modelling study, Intertek built MIKE rivers models of the main rivers into Cork Harbour. Flows were derived from these models. Wet and dry concentrations were derived from sampling data undertaken as part of the study. The representation of diffuse river loads is an integral part of this assessment, as they have the potential to be significant contributors to water quality impacts at the SFW, particularly in areas where there are large agricultural/livestock farming.
- **Development of Unit Impact Coastal Model Runs.** Coastal model runs were undertaken for each discharge location with a unit discharge flux for approximately one hour representing releases at 12 different tidal phases. The unit discharge model runs were carried out under a range of environmental conditions, i.e. mean spring and mean neap tides, seven different wind conditions, and wet and dry river flow conditions, to build a unit impact database at key sensitive locations for all discharges, which was used in SI assessment.
- **Impact Assessment – Validation.** The long-term distribution of modelled impacts using 10-years of network modelled outputs representing the historic condition of Uisce Éireann's sewerage network and assets. Validation of the modelling has been undertaken by comparing the modelled impacts with the distribution of historic sampling data collected within the BW and SFW. The proportional contribution from all sources to impacts within the BW and SFW has also been determined. Due to the method of validation for the SFW (see Section 4.4.1), SFW validation was undertaken on continuous sources alone.
- **Impact Assessment – Baseline.** A baseline scenario was established for the BW and SFW. These both included the current operation of intermittent discharges, as well as all of the continuous sources included in the historic validation scenario. The proportional contribution from all sources to impacts within the BW and SFW has been determined.
- **Impact Assessment – Future.** A future scenario was run for the BW and SFW to represent changes to specific catchments to the networks at Whitegate Aghada, Carrigtwohill and Midleton. The proportional contribution from all sources to impacts within the BW and SFW has been determined.

2. STUDY DRIVERS AND LEGISLATIVE REQUIREMENTS

2.1 Bathing Waters

The Bathing Water Directive (BWD) (2006/7/EC) is a sub directive of the Water Framework Directive (WFD), which came into legislation in 2006. The standards of the BWD became the standards in force from the start of the Bathing Season (BS) in 2015. With regard to Ireland, the BWD requires that all BWs should achieve at least the Sufficient standard by the end of 2015 BS. Certain actions must be taken where this has not been possible:

- Adequate management measures, as specified in the BWD and Irish Regulations, must be in place to mitigate any public health impacts
- Actions must be undertaken to achieve Sufficient water quality as soon as possible

The BS in Ireland is from 1st June to 15th September.

If the BW remains classified as Poor for five consecutive years, permanent advice against bathing must be issued. This effectively means the de-designation of the beach as a BW under the BWD.

The BWD has four levels of performance: Excellent, Good, Sufficient and Poor. The standards are assessed statistically using data collected during the current BS and the three preceding BS (where possible), making a four-year assessment period.

Classifications can be assessed using less than four years of data if four years is not available e.g. following a new designation. The directive also allows for discounting of samples where specific pollution events, e.g., high rainfall, can be predicted.

The BWD standards are based on the 90%-ile and 95%-ile values of the four-year dataset and assumes that concentration distributions fit a log-normal distribution. The percentiles derived from sample data are compared to the standards set out to derive classification.

These BWD standards and classifications are shown in Table 2-1.

Table 2-1 Performance Standards and Classifications for the BWD for Coastal and Transitional Waters

Parameter	Excellent Classification	Good Classification	Sufficient Classification	Reference Methods of Analysis
Intestinal enterococci (IE) (cfu/100ml)	100(*)	200(*)	185(**)	ISO 7899-1 or ISO 7899-2
Escherichia coli (EC) (cfu/100ml)	250(*)	500(*)	500(**)	ISO 9308-3 or ISO 9308-1

(*) Based upon a 95-percentile evaluation.

(**) Based upon a 90-percentile evaluation.

2.1.2 Bathing Water Status

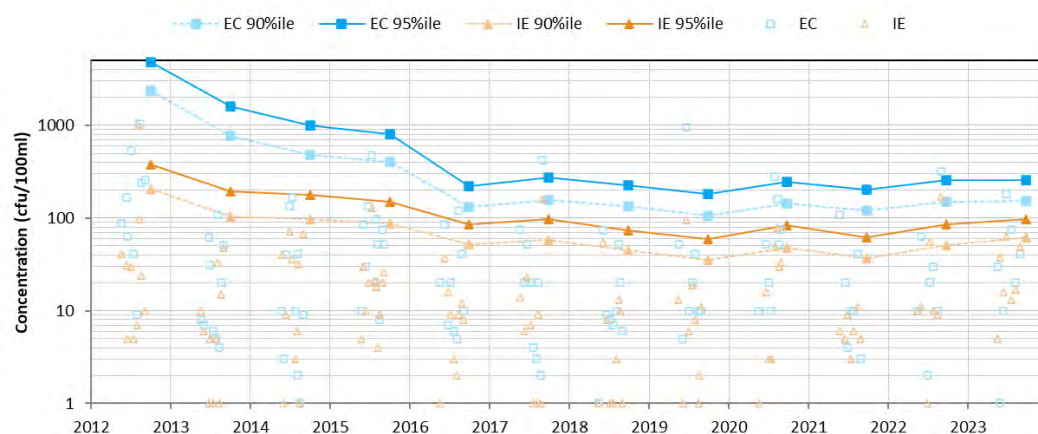
Table 2-2 shows the four-year rolling sampled 90th and 95th percentiles for each year and the resultant classification. Risk is noted if the percentiles are close to the class boundaries. Figure 2-1 shows the sampling undertaken by the EPA and rolling 4-year classifications. There was an improvement in water quality between 2012 and 2016. Fountainstown BW has been on the Good/Excellent threshold since

2016, except for 2019 where it was Excellent without risk. During this time, there were 5 reported events for risk of deterioration in water quality due to expected heavy rainfall.

Table 2-2 Fountainstown BW Classification

Classification Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
From	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
EC 90%ile	2373	767	475	406	131	157	135	107	143	120	151	152
EC 95%ile	4809	1613	999	796	219	273	226	180	247	201	255	258
EC Class	Poor	Poor	Sufficient	Sufficient	Excellent	Good	Excellent	Excellent	Excellent	Excellent	Good	Good
Risk			AT RISK	AT RISK	AT RISK		AT RISK		AT RISK	AT RISK		
IE 90%ile	207	104	97	87	52	58	45	35	48	37	51	61
IE 95%ile	375	193	178	150	85	97	74	59	84	61	85	98
IE Class	Poor	Good	Good	Good	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Risk		AT RISK	AT RISK	AT RISK	AT RISK	AT RISK			AT RISK		AT RISK	AT RISK
Overall Class	Poor	Poor	Sufficient	Sufficient	Excellent	Good	Excellent	Excellent	Excellent	Excellent	Good	Good
Risk			AT RISK	AT RISK	AT RISK		AT RISK		AT RISK	AT RISK		

Figure 2-1 Fountainstown BW Concentration and Rolling Classification



2.2 Shellfish Waters

The protection of Irish SFWs and measures for the protection of public health risks associated with consumption of microbiologically contaminated shellfish are governed by European and Irish Legislation. The relevant legislation for assessing SFW quality is as follows:

- **European Communities (Quality of Shellfish Waters) Regulations 2006 (S.I. No. 268 of 2006) (as amended)** – provides Mandatory and Guide Values for a range of parameters in Schedule 2 and 4 respectively for shellfish waters;
- **Regulation (EC) No 854/2004 (as amended)** - lays down specific rules for the organisation of official controls on products of animal origin intended for human consumption and sets limits in Annex II for EC in live bivalve molluscs which are used by the SFPA to classify live bivalve mollusc production and relaying areas;
- **Commission Regulation (EC) No 2073/2005 (as amended)** - lays down microbiological criteria in Annex I for certain micro-organisms in foodstuffs intended for human consumption, including bivalve molluscs.
- **Commission Regulation (EC) No 1881/2006 (as amended), transposed into Irish law by the European Communities (Certain Contaminants in Foodstuffs) Regulations 2010 (S.I. No. 218 of 2010)** - prescribes maximum concentrations in the Annex of contaminants in foodstuffs for human consumption, including bivalve molluscs.

The focus of this study is assessment of water quality impacts with respect to the European Communities (Quality of Shellfish Waters) Regulations 2006 (S.I. No. 268 of 2006) (as amended) i.e.

Shellfish Water Directive (SWD). It should be noted that the SWD (2006/113/EC) has been repealed by the WFD (2000/60/EC) on 22 December 2013. Therefore, the assessment of the SWD should be subsumed within the assessment of water bodies under the WFD. Nevertheless, and despite the repeal of the SWD, the Irish legislation which transposed the Shellfish Water Regulations (S.I. No. 268) of 2006 into domestic law remains in force.

There is no mandatory value in Schedule 2 of the Shellfish Water Regulations 2006 to define shellfish water quality. However, a guide value of ≤ 300 faecal coliforms/100g shellfish flesh or intervalvular fluid is included in Schedule 4 of these Regulations. Note that this is a shellfish flesh quality standard, rather than a water quality standard. To meet the Shellfish Regulations, 75% of samples for Faecal Coliforms must be < 300 Most Probable Number (MPN)/100g.

The SFPA does not assess shellfish quality in terms of Faecal Coliforms, rather it assesses using *Escherichia coli* (E.coli or EC) per 100g shellfish flesh and intervalvular fluid basis. The SFPA takes a value of ≤ 230 E. coli MPN/100g to be equivalent to the guide value of ≤ 300 Faecal Coliforms/100ml (Marine Institute (2013), DOE Marine Division (2014)). The ≤ 230 E. coli MPN/100g value corresponds to a Class A shellfish production area as classified by the SFPA.

An overview of the SFPA classification approach is presented in Table 2-3.

Table 2-3 Classification of Bivalve Mollusc Harvesting Areas²

Classification	Standard per 100g of live bivalve mollusc (LBM) flesh and intra-valvular fluid	Treatment required
A	< 230 E. coli per 100g of flesh and intra-valvular liquid ³	None Required
B	LBMs must not exceed the limits of a five-tube, three dilution Most Probable Number (MPN) test of 4,600 E. coli per 100 g of flesh and intra-valvular liquid ⁴	Purification, relaying in class A area or cooking by an approved method
C	LBMs must not exceed the limits of a five-tube, three dilution MPN test of 46,000 E. coli per 100 g of flesh and intra-valvular liquid.	Relaying for a long period or cooking by an approved method
Prohibited	$> 46,000$ E. coli per 100g of flesh and intra-valvular fluid ⁵	Harvesting not permitted

In the event that the EC results obtained during routine monitoring are above the upper limit for the classification of the production area, the implications are as follows:

- The product cannot be placed on the market for human consumption unless additional treatment is applied.
- For Class A areas, harvesting operations must cease until a follow up sample taken by the SFPA indicates that the EC levels are within range.

Note there is no in-water environmental quality standard (EQS) for the determination of Designated SFW Quality.

Concurrent to this study, Uisce Éireann commissioned a report from WRC to make recommendations for the assessment of impacts from SWOs, including impacts on SFWs. This was presented and shared

² Interpreted from Regulation (EC) No 854/2004, via Regulation (EC) No 853/2004, to Regulation (EC) 2073/2005.

³ By cross-reference from Regulation (EC) No 854/2004, via Regulation (EC) No 853/2004, to Regulation (EC) 2073/2005. Areas for which the limit of 230 MPN E coli per 100g but less than 1000MPN E coli per 100g are not exceeded in 10% of samples shall continue to be classified as Class A.

⁴ By way of derogation from Regulation (EC) No 854/2004, the competent authority may continue to classify as being of Class B areas for which the relevant limits of 4,600 E. coli per 100g are not exceeded in 90% of samples.

⁵ This level is by default as it is above the highest limit set in legislation.

with the EPA, the Marine Institute (MI) and the Department of Housing, Local Government and Heritage (DHLGH).

In line with the recommendations of the WRc report and following consultation with EPA and MI, Uisce Éireann have applied UPM targets of 110 EC/100ml at the geomean and 1500 EC/100ml at the 97% ile in the unit impact assessment for Cork Harbour SFW. These standards are used for Class B SFWs in England and Wales.

2.2.2 Shellfish Water Classification

Table 2-4 shows the classification for the oyster (*C. gigas*) shellfish beds within Cork Harbour for 2017-2024. The standard of oysters in all the beds in Cork Harbour has remained a consistent Class B. North Channel West and Rostellan have both been dormant, with North Channel West being currently dormant.

Table 2-4 Cork Harbour SFW Performance History

Bed Name	17/18	18/19	19/20	20/21	21/22	22/23	23/24
North Channel West	B	B	B	B	B*	B*	B*
North Channel East	B	B	B	B	B	B	B
Rostellan**	B**	B*	B*	B	B	B	B

* Dormant fishery

** Seasonal Classification 01 Aug - 01 Mar reverts to Class C at other times (Note 1)

3. POTENTIAL SOURCES

3.1 Uisce Éireann Assets

The SI assessment has been undertaken for long-term, strategic planning. Numerous network configuration – scenarios – are used to predict the impact of future changes on the microbiological environment around Cork Harbour:

- **Baseline Scenario:** Represents current operational conditions, including both continuous and intermittent discharges.
- **Development Scenario:** Represents the current network, development and optimised for reduce spills from the networks.
- **Solution Scenario:** Represents network modelling where solutions have been implemented to reduce discharges from the networks.

These scenarios are represented over multiple horizons (timeframes) by running different rainfall timeseries representative of each horizon through the network models. The horizons are 2030, 2055, and 2080.

This results in nine network (and therefore microbiological) model runs; three horizons for each of the three scenarios. The catchments represented are Ballincollig, Cork Lower Harbour (CLH), Cork City, Middleton Carrigtwohill, and Settlements (representing various inputs around the Cork Harbour waters).

All WwTPs in the model are shown in Table 3-1 and SWO information is given in Table A-1 in Appendix A. Effluent concentrations for WwTPs were sampled as part of the strategic study in 2021. It is assumed that concentrations will not significantly vary and that the level of treatment of the WwTPs will not change. It is noted that concentrations from the samples were higher than typical concentrations at a UV plant for Carrigtwohill, and lower than typical concentrations of secondary treated effluent at North Cobh.

Table 3-1 WwTP Concentrations and Flows

WwTP	Concentration (cfu/100ml)		Horizon Average Daily Flow (ADF) (m³/s)			
	EC	IE	Base	2030	2055	2080
Carrigrennan WwTP	1.43E+05	2.49E+04	1.50E+00	2.37E+00	2.80E+00	3.00E+00
Shanbally WwTP	1.74E+05	3.01E+04	1.99E-01	2.44E-01	2.91E-01	3.27E-01
Carrigtwohill WwTP	3.70E+05	1.63E+04	9.18E-02	1.04E-01	1.14E-01	1.19E-01
Midleton WwTP	4.06E+02	1.12E+03	9.90E-02	1.53E-01	1.89E-01	2.17E-01
North Cobh WwTP	1.04E+03	9.18E+02	8.65E-03	5.72E-03	6.98E-03	7.99E-03
Whitegate Aghada WwTP	5.18E+06	8.79E+04	1.06E-02	1.09E-02	1.29E-02	1.45E-02
Cloyne WwTP	1.00E+05	1.00E+04	7.40E-03	1.04E-02	1.24E-02	1.39E-02
Salene WwTP	1.02E+06	6.13E+04	2.30E-03	2.91E-03	3.36E-03	3.77E-03
Minane WwTP	1.00E+05	1.00E+04	1.40E-03	1.39E-03	1.67E-03	1.88E-03

Due to difficulties in network modelling, only certain years were available for microbiological modelling. This increases uncertainty of the microbiological modelling predicted results but is acceptable with a minimum of four years. The years used in each scenario and horizon are presented in Table 3-2.

Table 3-2 Network Modelling Year Availability

Scenario	2030	2055	2080
Base	2030	2051	2080
	2031	2053	2081
	2033	2056	2083
	2036	2057	2085
	2037		2086
			2087
Development	2030	2050	2080
	2031	2051	2081
	2033	2053	2083
	2036	2056	2086
	2037	2057	2087
Solution	2030	2050	2080
	2031	2051	2081
	2033	2053	2082

Scenario	2030	2055	2080
	2035	2055	2083
	2036	2056	2085
	2037	2057	2086
			2087
			2088
			2089

3.2 Rivers and Streams

Diffuse loads discharging to Cork Harbour via rivers have been represented using the detailed hydrological and water quality modelling framework developed under the Cork Wastewater Strategy. This framework incorporates one-dimensional MIKE11 river models for the principal catchments (Lee, Glashaboy, Owenboy, Owenacurra and Dungourney), calibrated and validated against long-term EPA gauging data.

For the current project, river flows have been updated for each of the three strategy horizons (2030, 2055, and 2080) using rainfall projections provided by Met Éireann's TRANSLATE project. These projections reflect anticipated climate-driven changes in rainfall intensity and frequency, allowing the models to simulate the effects of more frequent storm events and prolonged dry periods on river dilution capacity.

Microbiological concentrations (EC and IE) have been held unchanged across horizons unless site-specific data indicates otherwise. This approach ensures that the impact of climate change on riverine contributions to microbiological water quality is captured, particularly during low-flow conditions when dilution is reduced and bacterial persistence may be elevated. This assumption simplifies horizon-to-horizon comparison but may under-represent potential changes due to agricultural intensification, urban expansion, or land management improvements. Future monitoring should track trends to refine these inputs.

The Owenacurra, Dungourney, Glashaboy, Lee, Bride, Minane, Curragheen, and the Owenboy have been sampled for EC and IE. The rivers where sampling was not undertaken have used a similar river as a donor for bacterial concentrations.

Table 3-3 River Flows and Concentration Methods

River	Flow Method	Concentration Method
Lee	Modelled	Sampled
Bride (Lee)	In Lee model	From Lee
Curragheen	Scaled (Bride Lee)	Sampled
Shournagh	In Lee model	From Lee
Bride	Scaled (Bride Lee)	Sampled
Dungourney	In Owenacurra model	Sampled
Glashaboy	Modelled	Sampled
Minane	Scaled (Owenacurra)	Sampled
Owenboy	Modelled	Sampled

River	Flow Method	Concentration Method
Owenacurra	Modelled	Sampled
Ringabella	Scaled (Owenacurra)	From Minane
Farrannamanagh	Scaled (Owenacurra)	From Owenacurra
Knocknamadderee	Scaled (Owenacurra)	From Owenacurra
Carrigtwohill	Scaled (Glashaboy)	From Glashaboy

3.3 Other Sources

3.3.1 Septic Tanks

There are 43 representative septic tank discharges around Cork Harbour. For each discharge, the number of septic tanks was estimated from the number of properties from arial photography. A nominal flow of 100 l/h/day was applied with 2.8 people per household, at a concentration of 1×10^6 cfu/100ml. To estimate loads from these, a loss factor proportional to distance was applied to predict an annual load (Table 3-4). Table A-2 contains the number of septic tanks at each distance, their flows, and their loads and concentrations.

Table 3-4 Septic Tank Load Relative to Distance

Septic Tank Distance	Load per year (EC/yr)	
	EC	IE
>200	0	0
100-200	9.66E+09	1.61E+09
50-100	6.44E+10	1.08E+10
<50	2.15E+12	3.58E+11

3.3.2 Industrial Sources

Various industries discharge bacterial waste under permit limits. A fixed flow and concentration have been applied to these industrial sources according to the permits. These are given in Table A-3.

3.3.3 Misconnections

One misconnection has been identified and represented in the model. This is St Patrick's Bridge misconnection. The load from the misconnection is the sum of load from the properties in the surface water area, with an assumed foul flow concentration.

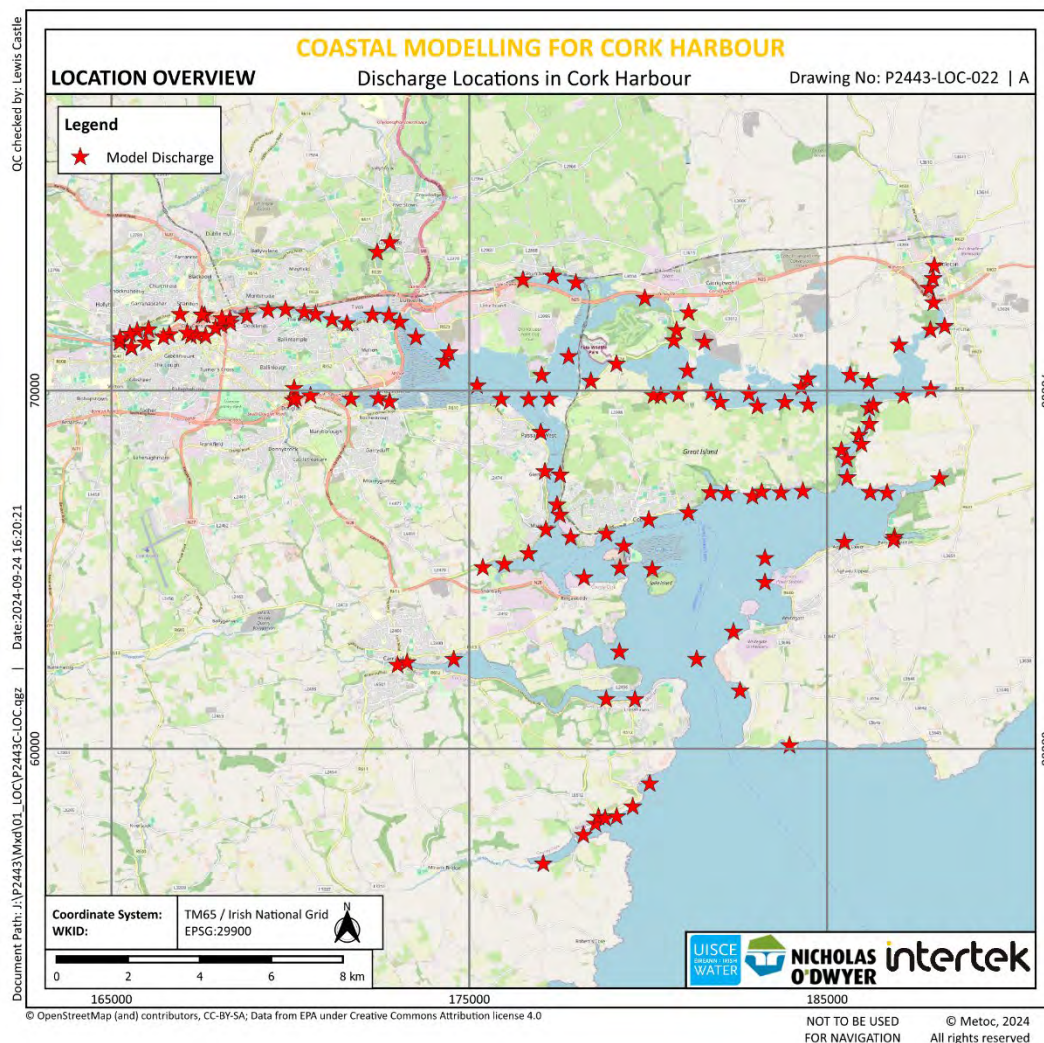
4. IMPACT ASSESSMENT

The impact assessment was carried out using Intertek's SI software, developed to evaluate the impact of multiple continuous and intermittent discharges on sensitive receivers, such as SFWs and BWs

4.1 Model Discharges

A large number of model discharges have been run in the coastal model, to create the unit impact database, from which the impact from all potential sources can be determined in the SI model. Figure 4-1 shows the model discharge locations around Cork Harbour.

Figure 4-1 Model Discharge Locations in Cork Harbour



4.2 Wind Conditions

Wind data is an important component of the overall impact assessment as the speed, frequency and direction of different winds is potentially important to pollutant transport and thus to impacts.

This impact assessment has been run under seven wind conditions. Wind data for the model has been taken from Ringaskiddy. Wind data analysis has been undertaken for four meteorological sites around

Cork Harbour; Cork, Roches Point, Ringaskiddy, and Templebreedy, see Figure 4-2. Of these sites, Ringaskiddy is the most representative of the sites of interest around Great Island since it is not exposed to the ocean nor at a high altitude as the other sites are. Representative wind conditions were determined using long term data (2001 - 2018).

Figure 4-2 Wind Sites in Cork Harbour

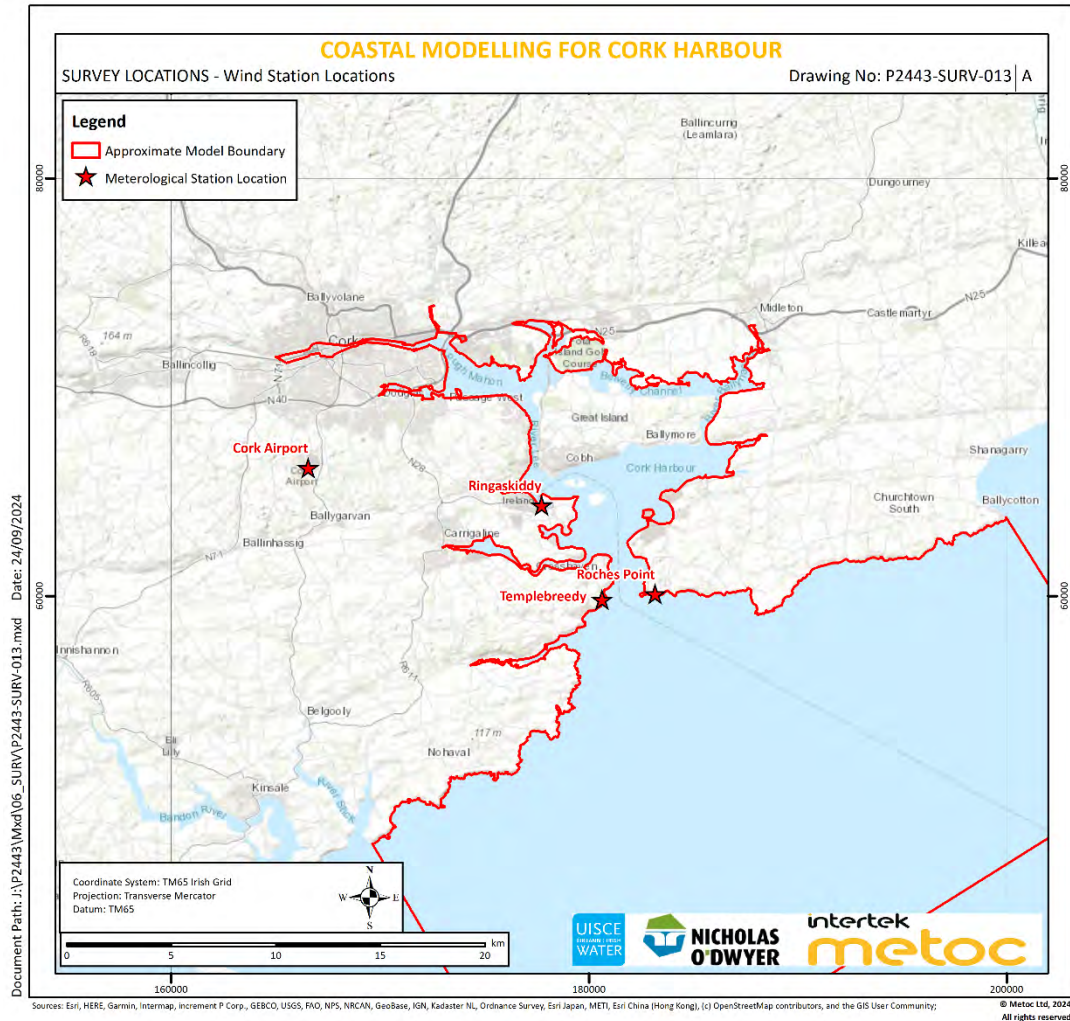


Table 4-1 gives a summary of the wind conditions used in the assessment. The wind frequencies given in the table are used to weight the impact of individual wind conditions in the impact assessment. Wind roses are given for the bathing season and full year in Figure 4-3 and Figure 4-4 respectively.

This assessment does not incorporate future wind projections from the TRANSLATE project. The existing wind dataset continues to provide a robust basis for evaluating microbiological impacts under current conditions. Should TRANSLATE outputs become more refined and validated for coastal wind regimes, future updates to the model may be considered. The aim of this assessment is to assess the impact of Uisce Éireann assets on the environment, therefore keeping wind data consistent will allow great confidence in horizon comparison.

Table 4-1 Wind Conditions Applied in the SI Assessment

Wind Condition	Wind Direction (N°)	Wind Speed (m/s)	Bathing Season Frequency (%)	Whole Year Frequency (%)
No Wind	-	0.00	10.5	9.9
Wind 2	30	3.82	3.8	5.5
Wind 3	90	4.59	8.0	9.0
Wind 4	150	4.49	11.5	11.8
Wind 5	210	4.70	29.4	27.2
Wind 6	270	4.24	21.3	21.7
Wind 7	330	4.65	15.6	15

Figure 4-3 Wind Rose for Ringaskiddy over the Bathing Season

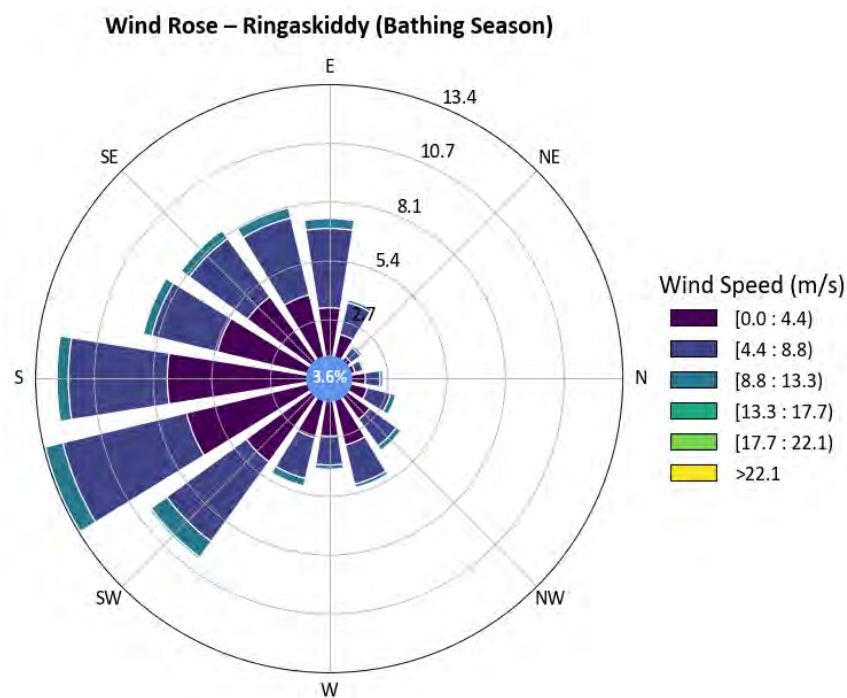
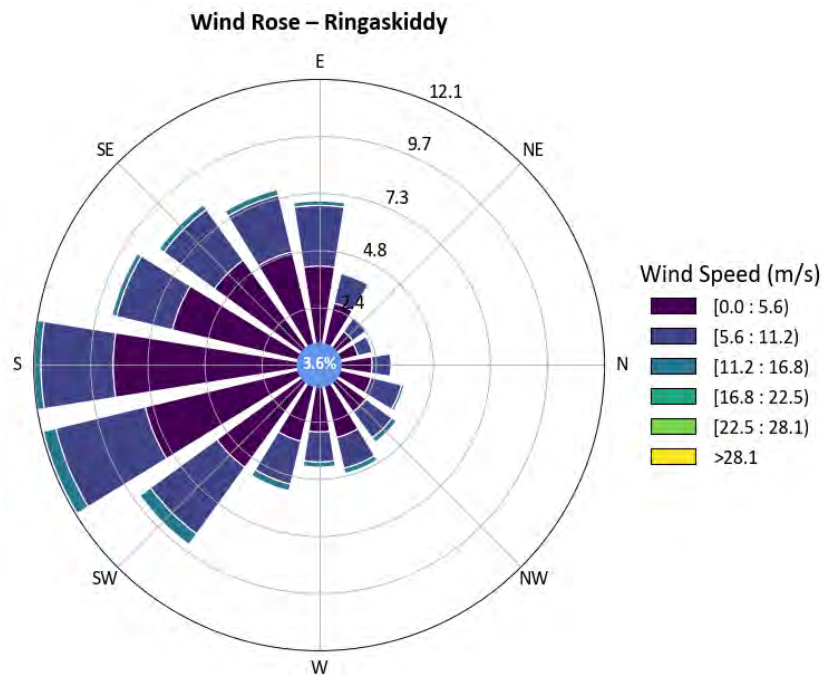


Figure 4-4 Wind Rose for Ringaskiddy over the Whole Year



4.3 Bacterial Mortality (T_{90})

Bacterial mortality or decay rates are primarily affected by sunlight and therefore vary significantly both spatially and temporally, which depend on the time of day/year, cloud cover and water turbidity.

The bacterial decay rate in a long-term impact assessment can be represented by the T_{90} value, which is the time required for 90% of the bacterial population to die. It is the most commonly used parameter for describing bacterial mortality.

In the summer season, a T_{90} of 16 hours was used for EC. In the winter season, a T_{90} of 32 hours was used to reflect the generally lower levels of sunlight in winter. These bacterial decay rates were determined from the SI validation exercise and are consistent with the values specified in the TSMM (IW, 2020).

4.4 STORM-IMPACT

SI combines outputs from a coastal water quality model (which is termed as the marine unit impact database), local sewerage network models (asset hydrographs), river catchment loads (river 'pollutographs'), and equivalent data for any private or trade discharges.

SI allows:

- a full 10 (or more) years of spill data to be modelled under a large number of environmental (wind and tide) conditions
- the assessment of bacterial impacts from multiple sources;
- the assessment of predicted performance against environmental standards;
- the determination of source apportionment to the impact from sources, and

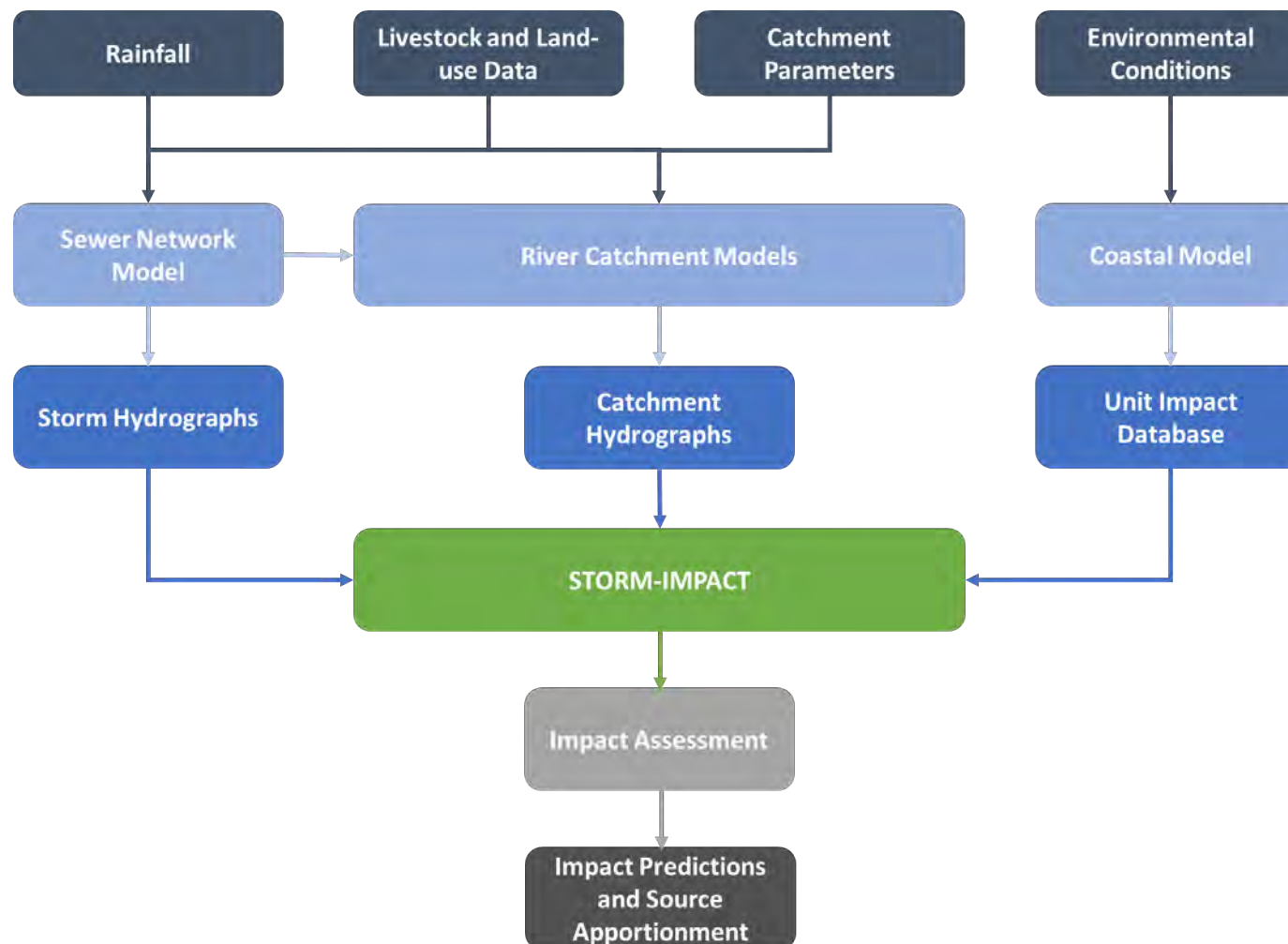
- testing of the environmental benefit that could be achieved for different asset and catchment management improvement scenarios (e.g. increased storm water storage).

All impacting sources (point and diffuse) are accounted for and their relative contributions to the total impact can be assessed to determine which discharges are most significant. SI provides the proportional contribution to impact at each classification threshold from all individual sources (source apportionment). This allows the most appropriate investment decisions to be made, e.g. management strategies, mitigation measures or interventions.

The SI assessment process is summarised in Figure 4-5. SI integrates network modelled hydrographs representative of the response of the sewerage system(s), other point sources (e.g. private discharges) and diffuse river loads, with a database of unit impacts derived from coastal model applications undertaken for all potential sources under a range of environmental conditions.

The SI outputs have been validated by comparison of the modelled predictions from the historic water quality condition with historic sampling data collected within Cork Harbour.

Figure 4-5 Schematic of the SI Approach



4.4.1 Validation

The SI model was previously validated under the CHSMS, with results documented in a previous Intertek Metoc report (P2443_R6442_Rev0). Validation was undertaken for both bathing and shellfish waters using long-term EPA monitoring data and targeted sampling campaigns.

4.4.1.1 Bathing Water Validation

Validation at Fountainstown BW used EPA sampling data from 2012–2022. The SI model was run using historic discharge and environmental conditions, and predicted concentrations of EC and IE were compared against observed percentiles and geomeans. The model reproduced the observed classification thresholds well with the EC 90th percentile of sampling 123 cfu/100ml versus the model 142 cfu/100ml, and the IE 90th percentile sampling of 47 cfu/100ml and modelled prediction of 24 cfu/100ml, both of which are Excellent classification.

Sensitivity testing was undertaken for decay rates (T90) and source types. EC decay rates between 12–20 hours and IE between 24–40 hours were tested. Fountainstown was found to be sensitive to decay assumptions, particularly for EC. Source sensitivity testing showed rivers and septic tanks as dominant contributors, with negligible influence from WwTPs, SWOs, or industrial sources.

4.4.1.2 Shellfish Water Validation

Due to dry-weather bias in sampling, SFW validation was limited to continuous sources (WwTPs, rivers, septic tanks, industrial discharges, and misconnections). Sampling data from EPA and Uisce Éireann (2016–2022) was used across 13 locations. Model predictions were compared to observed geomeans and 97th percentiles. The model generally reproduced spatial patterns, with good agreement in estuarine zones and elevated concentrations near Aghada and Midleton. Some underprediction was noted in the North Channel, suggesting potential unrepresented sources.

Shellfish flesh sampling data was also used to cross-check model predictions. While direct comparison is not possible, predicted water quality classifications aligned with observed Class B designations, with several sites showing greater than 70% of samples within Class A thresholds.

The validation confirmed the SI model's suitability for source apportionment, performance assessment, and scenario testing. Full details are provided in the CHSMS Bacterial Assessment (Intertek Metoc, 2025).

5. RESULTS AND DISCUSSION

This section presents the outcomes of the microbiological impact assessment. The assessment has been delivered using Intertek's SI software, applying the unit-impact methodology to evaluate the influence of both continuous and intermittent discharges on the designated BW and SFWs within Cork Harbour. The previous modelling included calibration and validation of the SI model for both the BW and the SFWs. The current assessment is looking at the impact of various network modelling horizons across the project's timeframe.

There are three horizons (timeframes) in the assessment: 2030; 2055; and 2080. They are each run for three scenarios:

- **Baseline Scenario:** Represents current operational conditions, including both continuous and intermittent discharges.
- **Development Scenario:** Represents the current network, development and optimised for reduce spills from the networks.
- **Solution Scenario:** Represents network modelling where solutions have been implemented to reduce discharges from the networks.

In the plots below, sites are coloured based on concentrations. These are shown to 'meet target' or 'not meet target'. The relevant targets are determined from legislation and policy presented in Section 2. For a BW, target is the required Good threshold (500 EC/100 ml). For SFW, there are two targets: a geomean threshold of 110 EC/100ml and a 97th percentile threshold of 1500 EC/100ml. Figure titles present the target applicable to the plot.

5.1 BW

Table 5-1 presents the key BW statistics for EC and IE for all scenarios and horizons. The only designated BW in Cork Harbour, Fountainstown BW, does not change significantly due to changes in each scenario and horizon.

However, there is one scenario where the model predictions are significantly different: the Solution scenario, 2080 horizon. This is about 20 EC/100ml and 3 IE/100ml higher for the 90th percentiles. For most scenario and horizons, there is five or six years of network model data available. However, for Solution scenario, 2080 horizon, there are nine years of network model data available. The Solution scenario contains years 2082, 2088, and 2089 that neither the Baseline (Base) nor Development scenario contain. As Figure 5-1 shows, both Base and Development contain three of the lowest river flow (rainfall) years for BWs, while the Solution contains the second and third highest river flow years that the Base and Development omit.

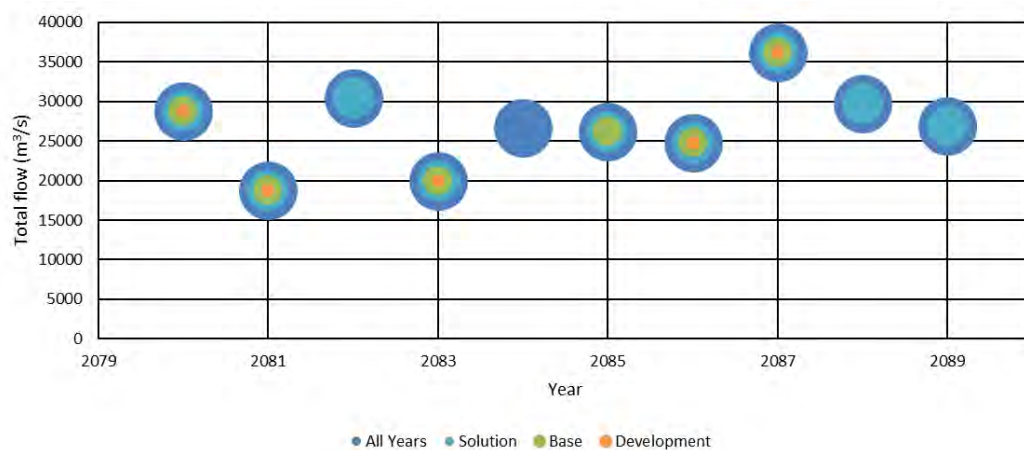
If only the same years as the Base scenario is used for model prediction, the model predicts an EC 90th percentile of 104 cfu/100ml and 95th percentile of 150 cfu/100ml, and an IE 90th percentile of 20 cfu/100ml and 95th percentile of 28 cfu/100ml. This is in line with the other model predictions.

The relatively higher concentrations are not due to Uisce Éireann assets alone, the rivers are the main impact for Fountainstown BW (see Section 5.1.2).

Table 5-1 Modelled BW Performance

Site	EC (cfu/100 ml)		IE cfu/100ml	
	90 th percentile	95 th percentile	90 th percentile	95 th percentile
Base 2030	103	147	20	28
Base 2055	104	150	20	28
Base 2080	104	150	20	28
Development 2030	103	147	20	28
Development 2055	102	145	20	27
Development 2080	103	150	20	28
Solution 2030	103	149	20	28
Solution 2055	105	152	20	28
Solution 2080	125	197	23	34

Figure 5-1 Total River Flow for Select Scenarios for 2080



5.1.2 Source Apportionment

Source apportionments for the 95th percentile for EC and IE are shown in Figure 5-2 and Figure 5-3. Uisce Éireann asset contributions are consistently less than 5% of the total predicted impact at Fountainstown, with rivers contributing over 90% across all scenarios. There is no significant difference from the changes to the networks. Since there no significant differences, only the figures for the Base 2030 model are shown and comparison tables given in Appendix B.1.1.

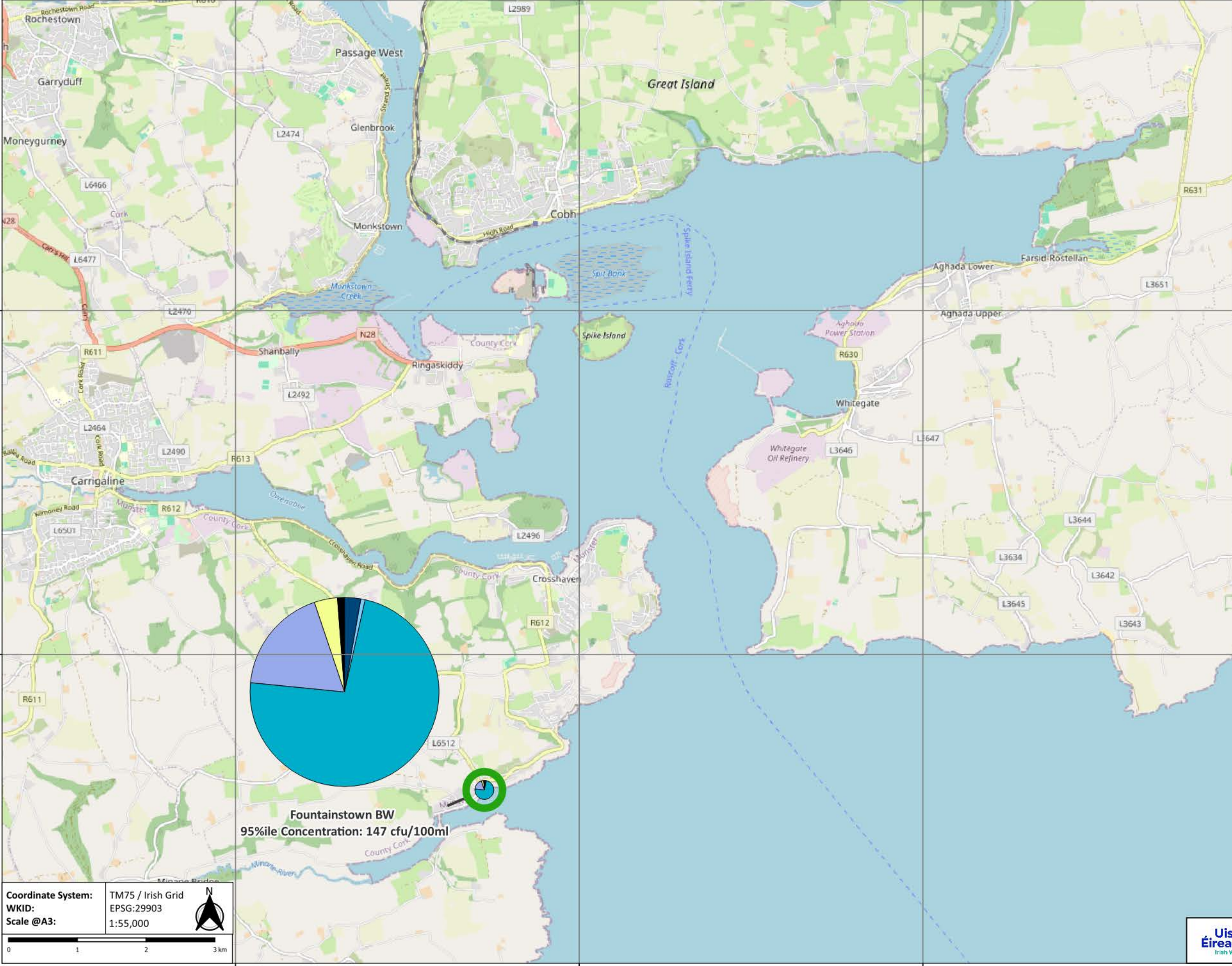
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CORK SDS

SOURCE APPORTIONMENT

Bathing Water Base 2030 EC at Good 500 cfu/100ml

Drawing No: P2443-APP-001 | A



Legend

Monitoring Point

- Meets UPM threshold
- Does not meet UPM threshold
- Monitoring Point Failure

100
50
0
10

Source Apportionment Contributor

- River Minane Wet
- River Minane Dry
- River Ringabella Wet
- River Ringabella Dry
- Fountainstown 1 Septic Tank
- Other



Coordinate System: TM75 / Irish Grid
WKID: EPSG:29903
Scale @A3: 1:55,000

N

0 1 2 3 km

Uisce Éireann Jacobs intertek metoc

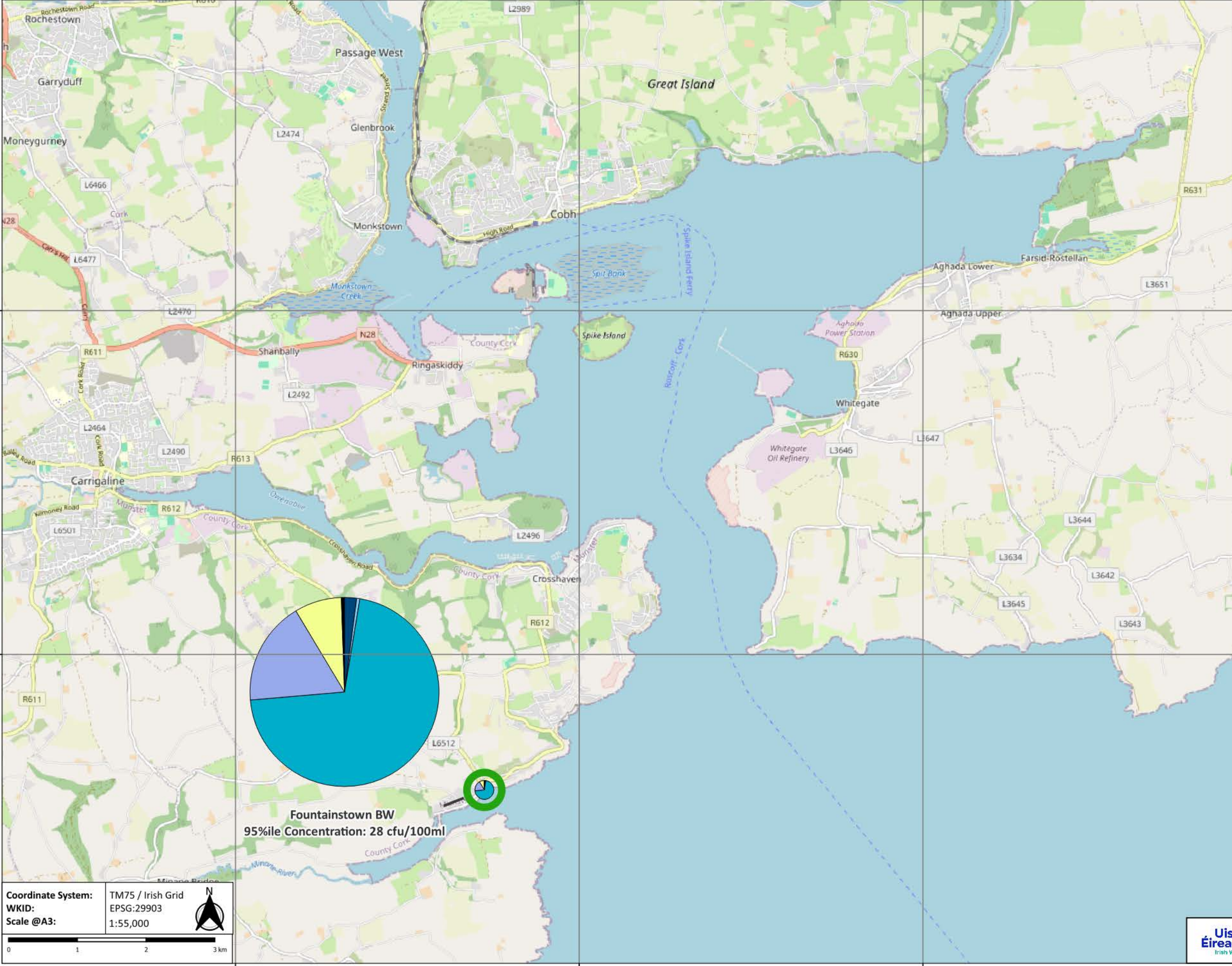
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CORK SDS

SOURCE APPORTIONMENT

Bathing Water Base 2030 IE at Good 200 cfu/100ml

Drawing No: P2443-APP-002 | A



Legend

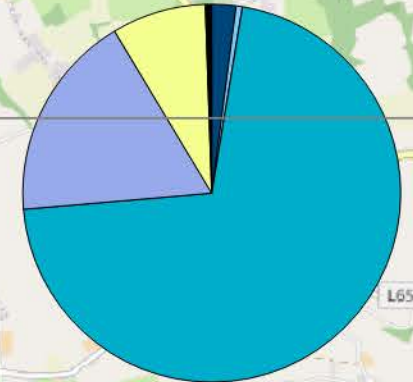
Monitoring Point

- Meets UPM threshold
- Does not meet UPM threshold
- Monitoring Point Failure

100
50
0
10

Source Apportionment Contributor

- River Minane Wet
- River Minane Dry
- River Ringabella Wet
- River Ringabella Dry
- Fountainstown 1 Septic Tank
- Other



Fountainstown BW
95%ile Concentration: 28 cfu/100ml

Coordinate System: TM75 / Irish Grid
WKID: EPSG:29903
Scale @A3: 1:55,000

N

0 1 2 3 km



5.2 SFW

Table 5-2 and Table 5-2 show the model predictions for the geomean and the 97th percentile respectively. The predicted geomean concentrations are shown spatially in Figure 5-4 for the geomean and Figure 5-5 for the 97th percentile.

Geomean Results

Geometric mean values are generally low across much of the Rostellan and North Channel SFW areas, with the highest values occurring at sites closest to riverine inputs, particularly LE500 (Owenacurra River), LE510, and LE530. At LE500, concentrations increase from about 2,200 cfu/100ml in 2030 (Base) to about 2,400 cfu/100ml in 2080. Under the Solution scenario, LE500 reduces to about 2,100 cfu/100ml by 2080. Most Rostellan West and North Channel sites record geomeans of 3 cfu/100ml or less across all scenarios, with little change over time.

97th Percentile Results

The highest 97th percentile concentrations occur in the Owenacurra Estuary, particularly at LE500, LE510, and LE530. Under Base conditions, LE500 increases from about 33,800 cfu/100ml in 2030 to about 39,500 cfu/100ml in 2080. Development conditions show further increases, with LE500 exceeding 40,600 cfu/100ml by 2080. The Solution scenario results in substantial reductions, with LE500 decreasing to about 24,100 cfu/100ml by 2080, representing a reduction of roughly 40 percent compared with Development.

Sites within Rostellan West and adjacent North Channel locations remain low in absolute terms (below 20 cfu/100ml) across all scenarios. The 97th percentile at these sites increases modestly under Development before stabilising or reducing under Solution scenario.

Spatial Summary

The model outputs and mapped locations show that the highest concentrations are predicted for sites nearest to known riverine inputs in the Owenacurra Estuary up to around 40,000 cfu/100ml (97th percentile) under Development scenarios. These values reduce by about 40% under Solution scenarios but remain above the 1,500 cfu/100ml target, although this location is outside the designated SFW boundaries. Concentrations in the Rostellan SFW remain (typically 1-15 cfu/100ml geomean; less than 20 cfu/100ml at the 97th percentile) below target concentrations, though small increases under the Development scenarios indicate some sensitivity to network model changes. The Solution scenario demonstrates that targeted interventions can deliver substantial reductions at the most impacted sites while maintaining low levels in cleaner shellfish waters.

Table 5-2 Modelled SFW Performance – Geomean

Site	Base			Development			Solution		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
Cork Harbour Rostellan North (Oysters)	3	3	3	3	3	3	3	3	3
CK-CH-NE	1	1	1	1	1	1	1	1	1
CK-CH-NW	1	1	1	1	1	1	1	1	1
CK-CH-RN	1	1	1	1	1	1	1	1	1
LE510	1101	1036	1160	1120	1068	1188	983	1003	1118
LE520	399	345	435	402	364	437	217	222	249
LE530	97	84	107	98	89	107	51	52	59
LE540	5	4	5	5	5	5	3	3	3
LE610	1	1	1	1	1	1	1	1	1
LE620	3	3	3	3	3	3	3	3	3
LE810	7	7	7	7	7	7	7	7	7
LE820	2	2	2	2	2	2	2	2	2
LE430 - North Channel, Brick Island	2	2	2	2	2	2	2	2	2
LE450 - North Channel, Bagwells Hill	1	1	1	1	1	1	1	1	1
LE500- Owenacurra River 0.5km d/s Cork Bridge	2176	1980	2355	2252	2071	2365	1940	1974	2136
LE630 - Adjacent to Carlisle Fort	97	97	97	97	97	97	97	97	97
NORTH CHANNEL GREAT ISLAND - WFD Reporting Station	1	1	1	1	1	1	1	1	1
North Channel Great Island Red Island	1	1	1	1	1	1	1	1	1
Rostellan South 01	1	1	1	1	1	1	1	1	1
Rostellan South 05	2	2	2	2	2	2	2	2	2
Rostellan West 01	1	1	1	1	1	1	1	1	1

Site	Base			Development			Solution		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
Rostellan West 02	1	1	1	1	1	1	1	1	1
Rostellan West 03	2	2	2	2	2	2	2	2	2
Rostellan West 04	1	1	1	1	1	1	1	1	1
Rostellan West 05	1	1	1	1	1	1	1	1	1
Rostellan West 06	1	1	1	1	1	1	1	1	1
Cork Great Island North Channel 01	1	1	1	1	1	1	1	1	1

Table 5-3 Modelled SFW Performance – 97th Percentile

Site	Baseline			Development			Solution		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
Cork Harbour Rostellan North (Oysters)	15	15	15	15	15	15	15	15	15
CK-CH-NE	1	1	1	1	1	1	1	1	1
CK-CH-NW	1	1	1	1	1	1	1	1	1
CK-CH-RN	1	1	1	1	1	1	1	1	1
LE510	14234	14694	16624	14856	14961	17068	11004	11729	13226
LE520	10195	9772	10865	10218	9561	10819	2387	2566	2930
LE530	3630	3435	3822	3621	3372	3812	705	751	859
LE540	175	157	193	173	156	189	36	37	42
LE610	4	4	4	4	4	4	4	4	4
LE620	14	15	15	14	14	14	14	14	14
LE810	50	50	50	50	50	50	50	50	50

Site	Baseline			Development			Solution		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
LE820	17	17	17	17	17	17	17	17	17
LE430 - North Channel, Brick Island	6	6	6	6	6	6	6	6	6
LE450 - North Channel, Bagwells Hill	11	11	12	11	11	12	5	5	5
LE500- Owenacurra River 0.5km d/s Cork Bridge	33777	34041	39517	37276	34337	40641	21580	22293	24081
LE630 - Adjacent to Carlisle Fort	730	730	730	730	730	730	730	730	730
NORTH CHANNEL GREAT ISLAND - WFD Reporting Station	2	2	2	2	2	2	2	2	2
North Channel Great Island Red Island	8	8	8	8	8	8	7	7	7
Rostellan South 01	2	2	2	2	2	2	2	2	2
Rostellan South 05	17	19	21	17	19	21	17	19	21
Rostellan West 01	1	1	1	1	1	1	1	1	1
Rostellan West 02	1	1	1	1	1	1	1	1	1
Rostellan West 03	14	14	14	14	14	14	13	13	13
Rostellan West 04	3	3	3	3	3	3	3	3	3
Rostellan West 05	7	7	8	7	7	8	7	7	8
Rostellan West 06	3	3	4	3	3	4	3	3	4
Cork Great Island North Channel 01	6	6	6	6	6	6	6	6	6

Figure 5-4 SFW Baseline EC Geomean Concentration

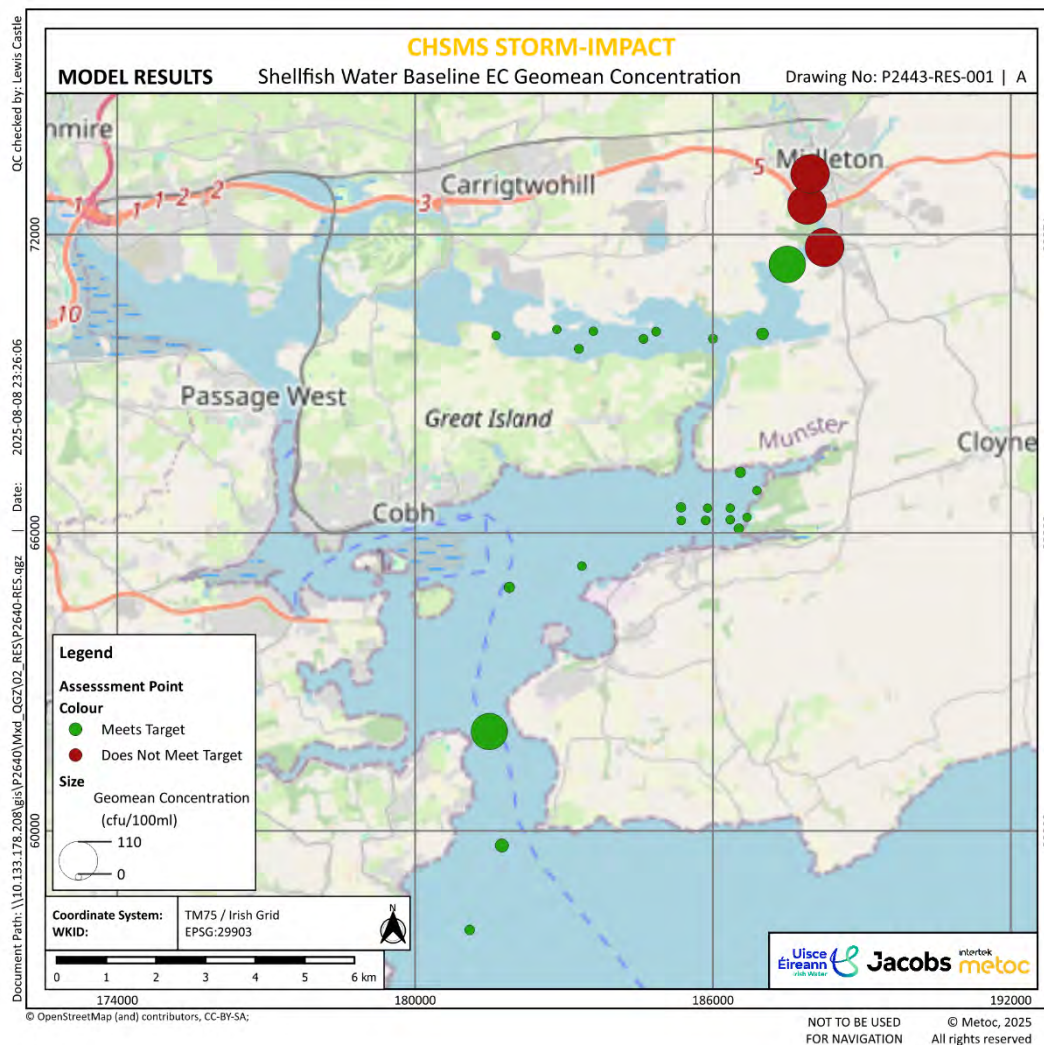
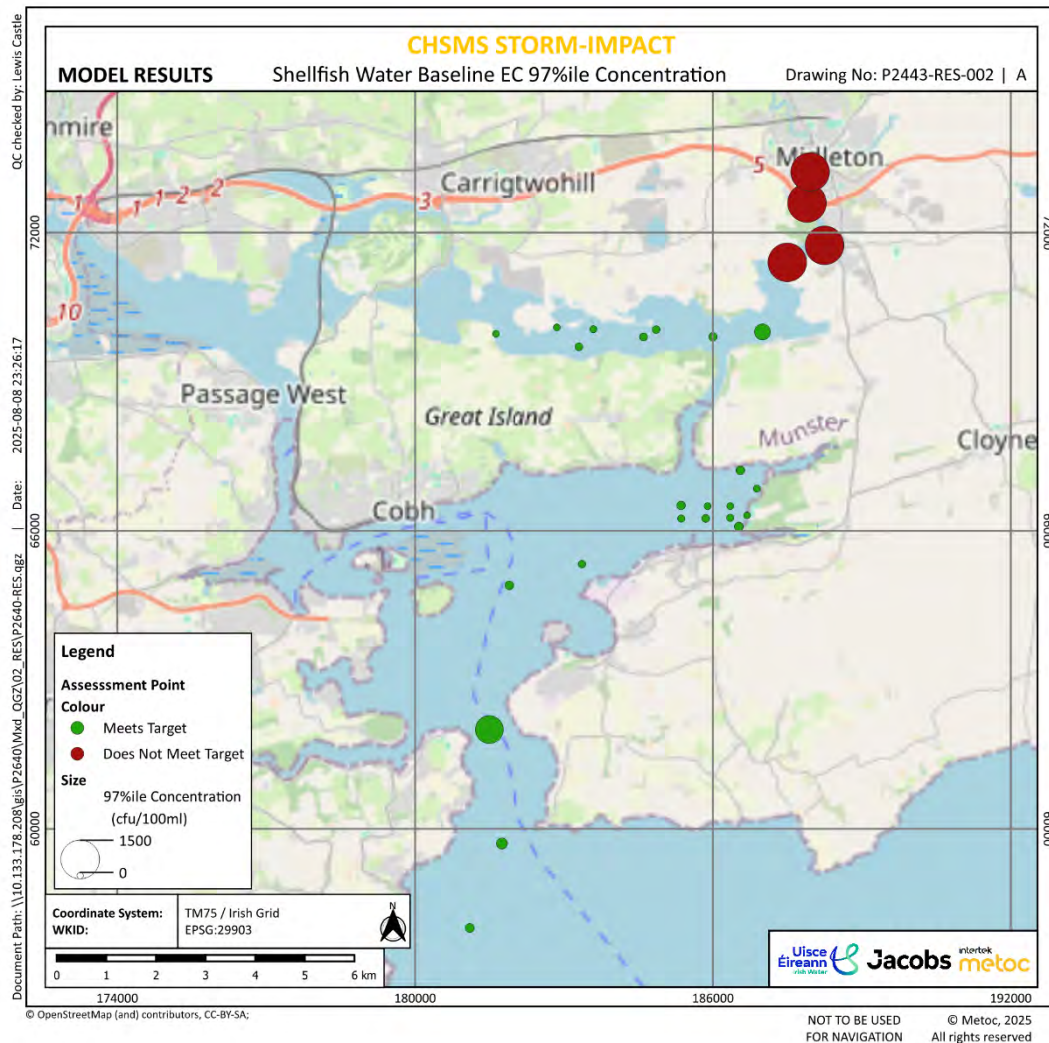


Figure 5-5 SFW Baseline EC 97th Percentile Concentration



5.2.2 Source Apportionment

Figure 5-6 to Figure 5-11 show the Base scenario 2030 horizon source apportionment. A white pie is shown for areas where the threshold is not exceeded for any significant amount of time (less than 0.5%) or where the geomean or the 97th percentiles are 2 EC/100ml or less (insignificant concentration). This shows that SWOs are predicted to have a significant impact at a few locations, in the North Channel and to the west of Rostellan. However, at the locations where the contribution from SWOs accounts for most of the impact, the predicted concentration is low.

Source apportionment outputs for all modelled SFW monitoring points show consistent patterns across scenarios and horizons. At the key locations around Rostellan and the North Channel, all monitoring points meet the target. This reflects their location in well-flushed areas of the harbour, distant from the main riverine inputs, suggesting that the influence of upstream sources is minimal by the time waters reach these SFW monitoring locations.

The Owenacurra Estuary, to the north of Rostellan, receives the highest modelled contributions from point sources such as the Midleton WwTP. However, this estuary is not designated as SFW. The low apportionment values for the Rostellan monitoring points indicate that elevated concentrations observed within the Owenacurra Estuary are effectively diluted before reaching the SFW boundary.

Given this consistency, a single set of apportionment figures has been prepared and is presented as representative of all scenarios and assessment years. Full apportionment tables are given in a separate Excel document.

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CORK SDS

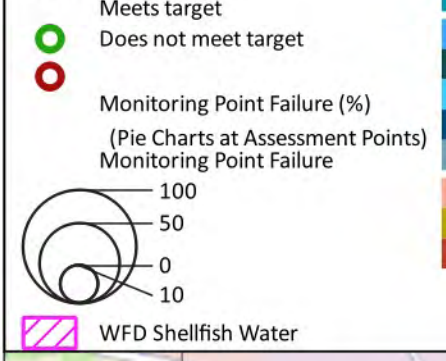
SOURCE APPORTIONMENT

Shellfish Water Base 2030 EC at Geomean 110 cfu/100ml (North Channel)

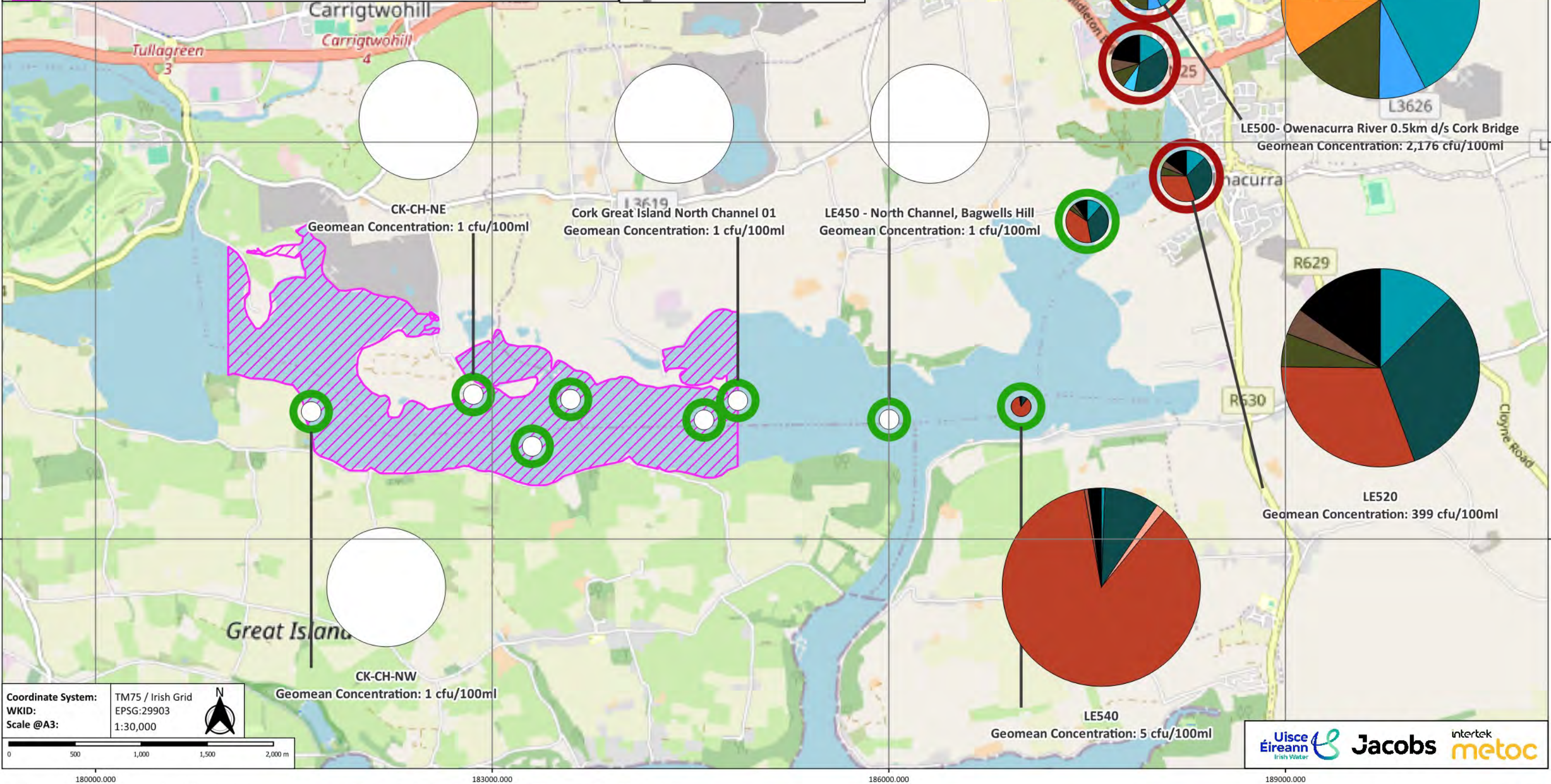
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Legend

Monitoring Point



- Source Apportionment Contributor
- | | |
|--------------------------|-------------------------|
| Whitegate Aghada WwTP | Ballick No 1 2 SWO |
| River Owenacurra Wet | Ballick No 1 5 SWO |
| River Owenacurra Dry | Ballick No 1 4 SWO |
| River Dungourney Wet | Watergrasshill WwTP SWO |
| River Dungourney Dry | Drurys Ave SWO |
| River Farrannamanagh Wet | South Great Island C ST |
| River Farrannamanagh Dry | East Passage B ST |
| Ballinacurra No 1 PS SWO | East Passage F ST |
| Ballinacurra No 2 PS SWO | North channel B ST |
| Ballick No 2 SWO | Other |



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CORK SDS

SOURCE APPORTIONMENT

Shellfish Water Base 2030 EC at 97%ile 1500 cfu/100ml (North Channel)

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Legend

Monitoring Point

- Meets target
- Does not meet target

Monitoring Point Failure (%)
(Pie Charts at Assessment Points)

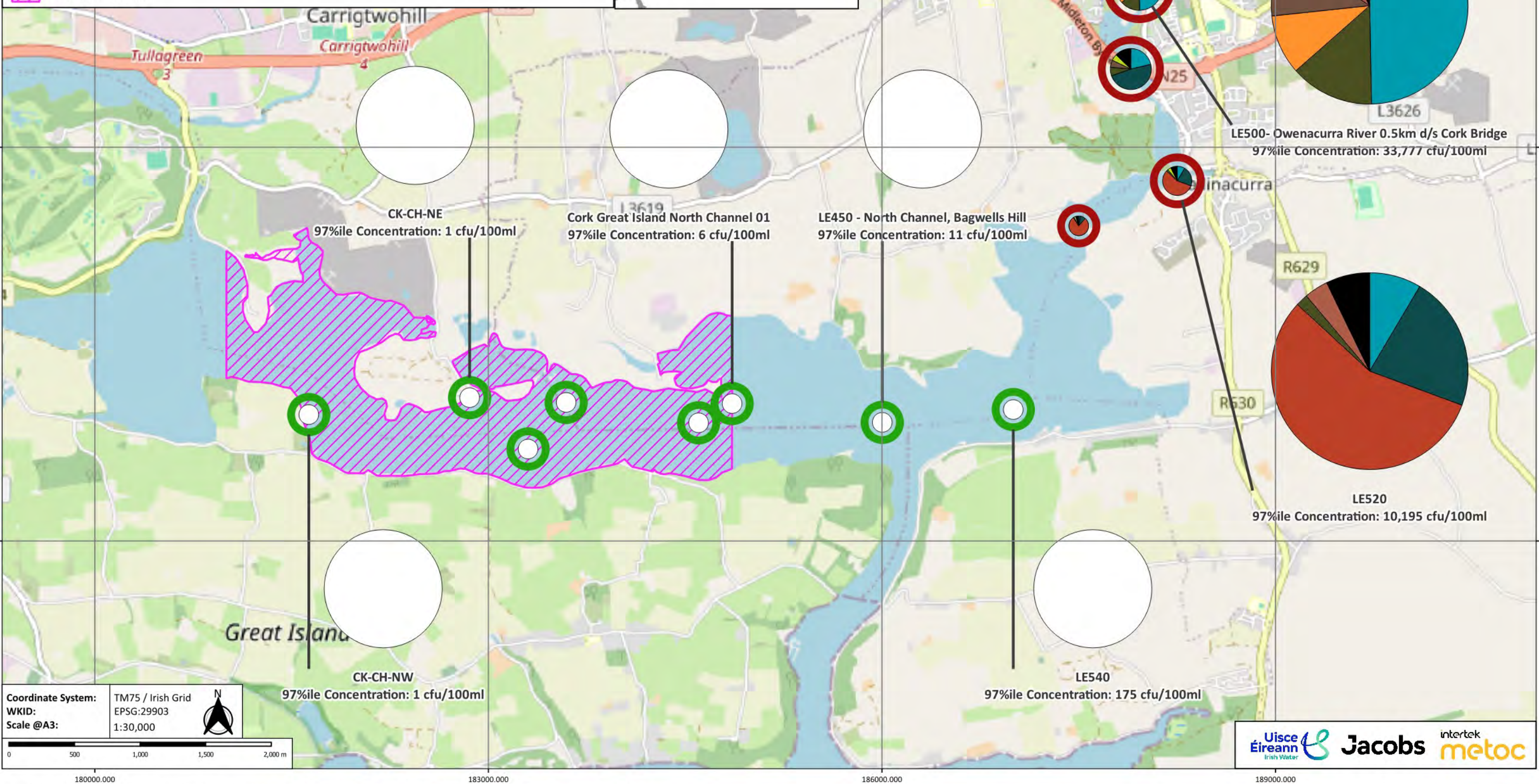
100
50
0
10

WFD Shellfish Water

Source Apportionment Contributor

- Whitegate Aghada WwTP
- River Owenacurra Wet
- River Owenacurra Dry
- River Dungourney Wet
- River Dungourney Dry
- River Farrannamanagh Wet
- River Farrannamanagh Dry
- Ballinacurra No 1 PS SWO
- Ballinacurra No 2 PS SWO
- Ballick No 2 SWO

- Ballick No 1 2 SWO
- Ballick No 1 5 SWO
- Ballick No 1 4 SWO
- Watergrasshill WwTP SWO
- Drurys Ave SWO
- South Great Island C ST
- East Passage B ST
- East Passage F ST
- North channel B ST
- Other



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0 500 1,000 1,500 2,000 m

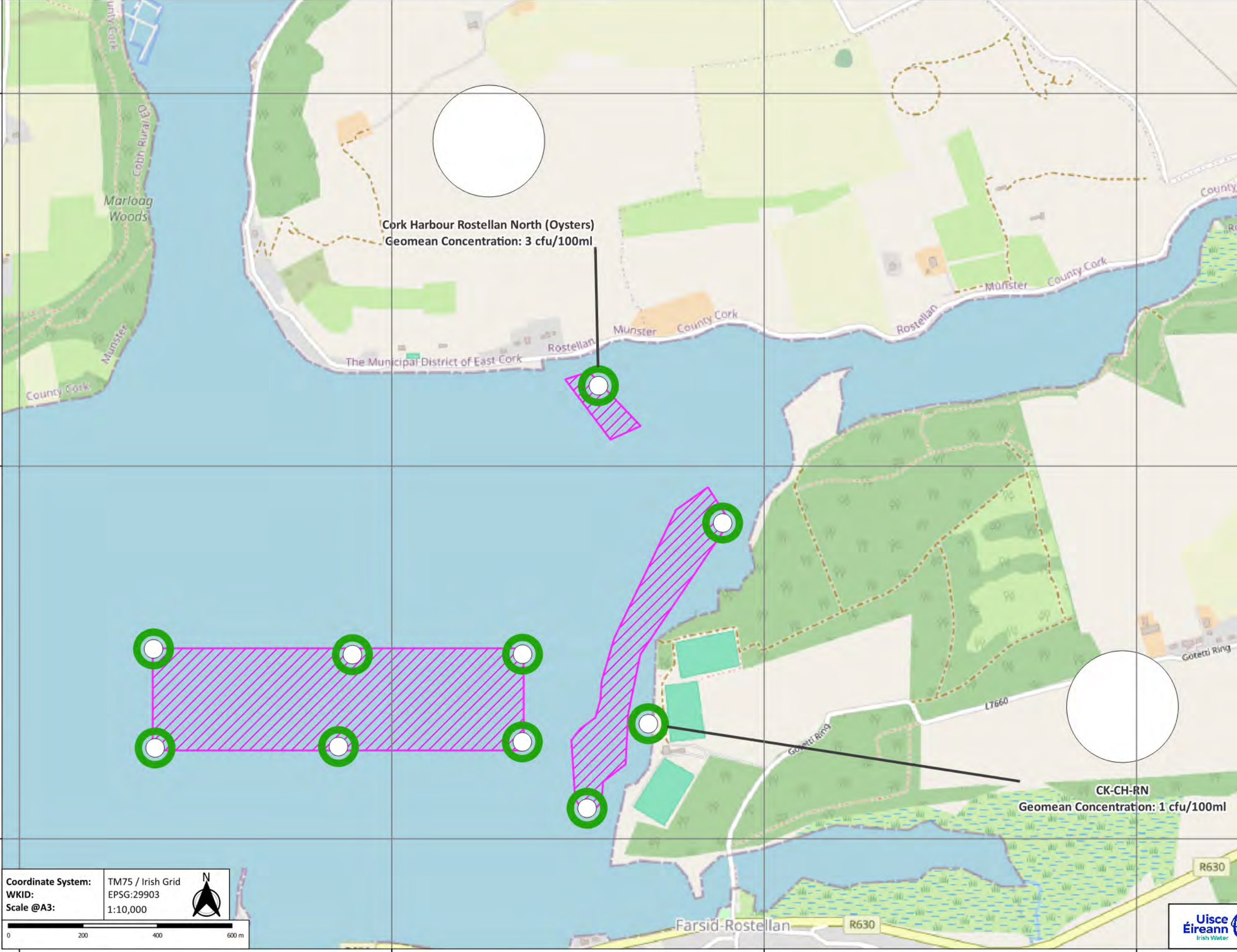
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Uisce Éireann
Irish Water

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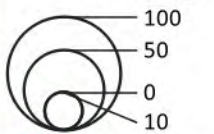
Monitoring Point

- Meets target
- Does not meet target



- Monitoring Point Failure (%)

(Pie Charts at Assessment Points)
Monitoring Point Failure



WFD Shellfish Water



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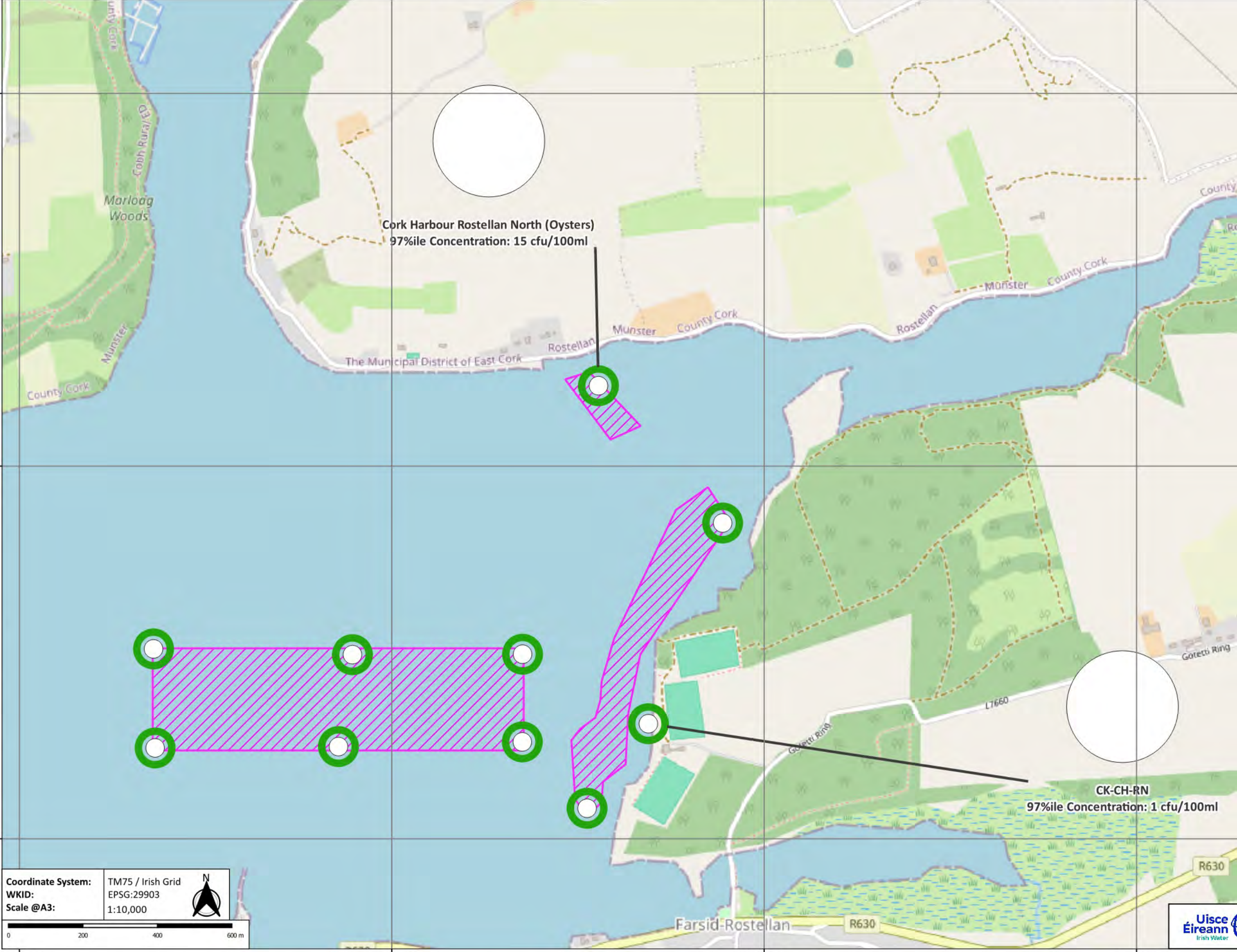
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CORK SDS

SOURCE APPORTIONMENT

Shellfish Water Base 2030 EC at 97%ile 1500 cfu/100ml (Rostellan)

Drawing No: P2443-APP-006 | A



Legend

- Monitoring Point**
- Meets target
 - Does not meet target
- Monitoring Point Failure (%)**
(Pie Charts at Assessment Points)
- 100
 - 50
 - 0
 - 10
- WFD Shellfish Water



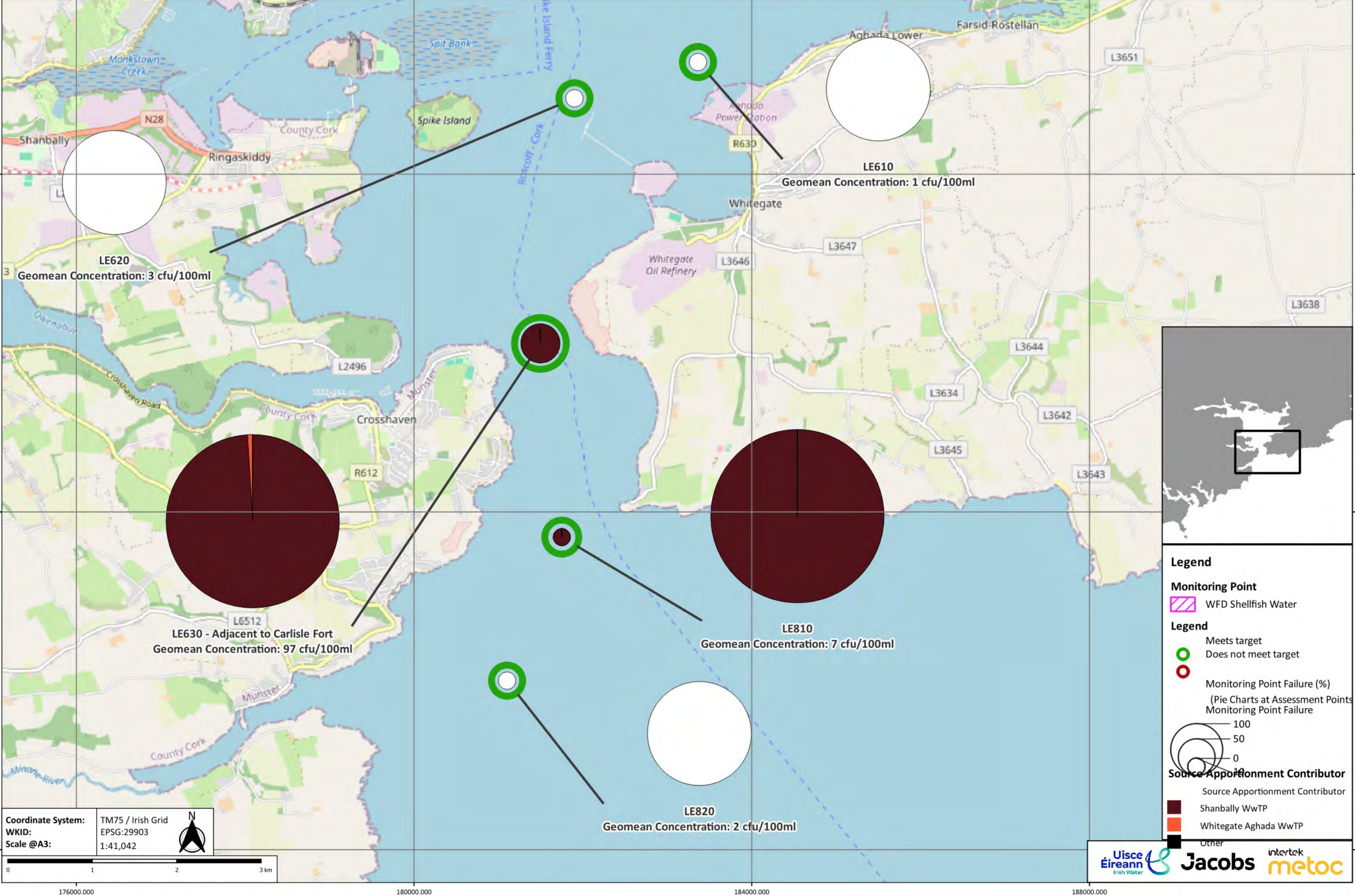
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0 200 400 600 m



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Legend

Monitoring Point

- WFD Shellfish Water

Legend

- Meets target
- Does not meet target

Monitoring Point Failure (%)

(Pie Charts at Assessment Points)

Monitoring Point Failure

- 100
- 50
- 0

Source Apportionment Contributor

- Source Apportionment Contributor
- Shanbally WwTP
- Whitegate Aghada WwTP
- Other

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Scale Bar: 0 1 2 3 km

North Arrow: N

Uisce Éireann **Jacobs** **intertek metoc**

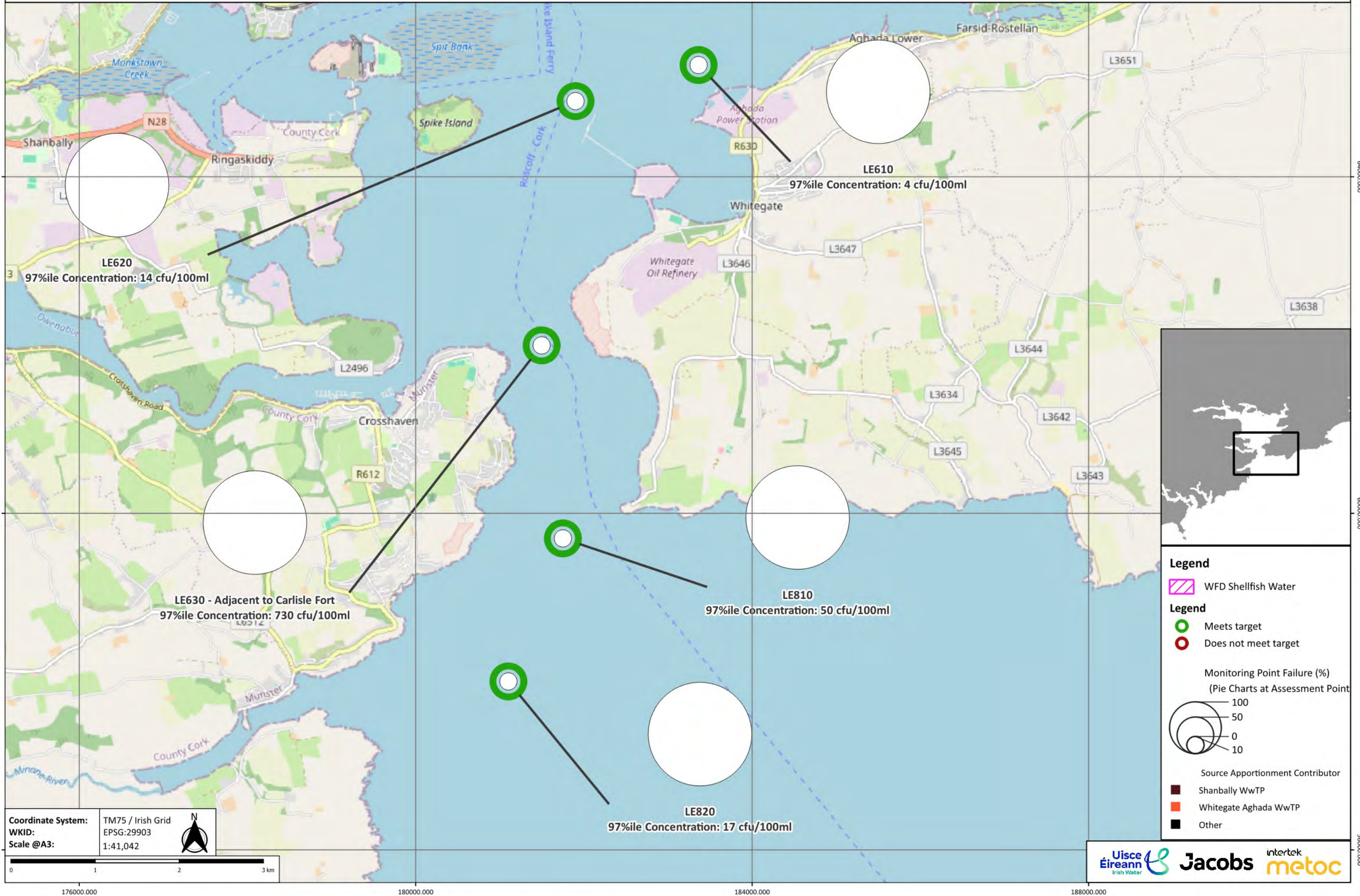
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SOURCE APPORTIONMENT

Shellfish Water Base 2030 EC at 97%ile 1500 cfu/100ml (Outer Harbour)

Drawing No: P2443-APP-008 | A



6. CONCLUSIONS

This assessment aimed to evaluate the impact of discharges from all Uisce Éireann assets, and all other known sources, such as rivers, septic tanks and industrial discharges, on the designated BW and the SFW areas in Cork Harbour. Contributions from each source to the impact at the BW and SFWs are determined in the assessment, and the most important contributors are identified. Future scenarios with climate change have been undertaken to demonstrate the impact of network changes.

6.1 BW

Fountainstown BW is the only designated bathing water in the study area. Across all scenarios (Base, Development, Solution) and time horizons (2030, 2055, 2080), modelled 95th percentile concentrations are around 150 cfu/100ml for EC and 30 cfu/100ml for IE, which is well below the Good classification thresholds of 500 cfu/100ml (for EC) and 200 cfu/100ml (for IE). There is little variation between Baseline, Development, and Solution scenarios. The only notable difference occurs in the Solution 2080 horizon, where higher predicted concentrations are linked to wetter years included in the model runs, rather than to asset changes. This difference reflects hydrological variation rather than changes in asset operation, with riverine contributions accounting for over 90% of the load at Fountainstown in all scenarios. Source apportionment identifies rivers as the dominant contributor to microbiological impact at Fountainstown, with negligible contribution from wastewater treatment plant discharges, storm water overflows, or industrial discharges.

6.2 SFW

The designated SFWs (Rostellan North, Rostellan South, Rostellan West, and North Channel) meet the water quality standards for SFW with geomean EC concentrations at monitoring points typically less than 3 cfu/100ml and 97th percentile EC concentrations less than 20 cfu/100 ml, compared to targets of 110 cfu/100ml and 1500 cfu/100ml respectively. Rostellan sites show low concentrations, reflecting good flushing and large distance from major sources. North Channel sites consistently record very low predicted concentrations, with limited connectivity from upstream sources due to the flow constraints at Belvelly Bridge and higher concentrations from the Owenacurra Estuary moving through East Passage. Performance is driven by strong tidal flushing and distance from major riverine inputs; the highest concentrations (e.g., 33,000-40,000 cfu/100ml at LE500) occur well outside the designated SFW boundaries.

Highest concentrations occur in the Owenacurra Estuary, outside designated SFW boundaries, with the greatest influence from riverine inputs and nearby point sources.

6.3 Key Findings

Diffuse riverine inputs are the principal driver of microbiological impacts at the BW and at sensitive points within the harbour. Uisce Éireann asset contributions to monitoring points are generally small, though localised effects are seen near certain WwTP discharges. Model results are consistent across scenarios for most locations, indicating stability in predicted water quality performance under current and planned network configurations.

Results are subject to uncertainty arising from: use of less than 10 years' network model data; assumption of constant riverine microbiological concentrations across horizons; and limited representation of private discharges and misconnections beyond those identified. The model indicates sensitivity to high-flow years.

REFERENCES

1 Intertek, 2023. *Cork Harbour Calibration and Validation Report*, 3D Hydrodynamic Model.

2 Intertek, 2023. *Cork Harbour Validation Report*, 3D Water Quality Model.

3 Sea-Fisheries Protection Authority (SFPA), 2024. *Classified Areas*. Available at: <https://www.sfpa.ie/What-We-Do/Molluscan-Shellfish/Classified-Areas> (Accessed: 26 September 2024 and previous years via Internet Archive)

APPENDIX A

Tables

A.1 MODEL INPUT TABLES

A.1.1 SWO Loads

Table A-1 SWO Network Modelling

SWO	Base			Development			Solution		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
Barryscourt WWPS EO SWO	Y	Y		Y	Y	Y	Y	Y	Y
IDA No1 WWPS ESO SWO	Y	Y		Y	Y	Y	Y	Y	Y
Old Cobh Road WWPS SWO	Y	Y		Y	Y	Y	Y	Y	Y
Church Lane SWO	Y	Y		Y	Y	Y	Y	Y	Y
Elm Road SWO	Y	Y		Y	Y	Y	Y	Y	Y
Carringwohill WwTP SWO	Y	Y		Y	Y	Y	Y	Y	Y
Dwyers Road PS SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Riversfield Estate SWO	Y	Y		Y	Y	Y			
Ballinacurra No 1 PS SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ballinacurra No 2 PS SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ballick No 2 SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ballick No 3 EO SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ballick No 1 1 SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ballick No 1 2 SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ballick No 1 5 SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ballick No 1 4 SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Drurys Ave SWO	Y	Y	Y	Y	Y	Y			
The Rock PS SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Roxboro Housing Estate PS SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Roxboro Mews PS SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Old Yoghla Road Oakwood PS Beechwood Court PS SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Oakwood PS SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
CARG Carrigaline Park (Att tank) SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
CARG Church Road SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
CARG Crosshaven Road SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
CARG Dunnes network overflow SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
CARG Old Water Park SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
COBH Dock Cottages SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
COBH Dockyard SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
COBH Old Town Hall SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
COBH Rushbrooke SWO	Y	Y	Y	Y	Y	Y	Y	Y	
COBH Station Car Park SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y

SWO	Base			Development			Solution		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
GLEN Glenbrook SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
MONK Coast Road SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
MONK Monkstown SWO	Y	Y	Y	Y	Y	Y	Y	Y	
PSWT Cork Road SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
PSWT Passage West SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
RNSY Coolmore Cross SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
RNSY Ringaskiddy Village SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
XHAV Carpark PS 1 SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
XHAV The Glen PS SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Lynch's Quay WwPS SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cow's Cross WwPS SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
North Cobh WwTP SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cloyne Dun Orga SWO	Y	Y	Y	Y	Y	Y			
Cloyne Riverside WwPS SWO	Y	Y	Y	Y	Y	Y			
Minane Bridge SW01 SWO	Y	Y	Y	Y	Y	Y			
Killeens WwTP Storm Tank SWO	Y			Y					
Killeens WwTP Sump Pump SWO	Y			Y					
Halfway Carpark SWO	Y	Y	Y	Y	Y	Y	Y		Y
Cloghroe WwPS SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cois Muileann WwPS SWO	Y	Y	Y	Y	Y	Y	Y	Y	
Environment Building WwPS SWO	Y	Y	Y	Y	Y	Y			
Gothic Bridge WwPS SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Kerry Pike WwPS SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ballygarvan WwTP SWO	Y	Y	Y	Y	Y	Y			
Blarney Storm Tank SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Dripsey WwTP Inlet SWO	Y	Y	Y	Y	Y	Y			Y
Dripsey WwTP Storm Tank SWO	Y	Y	Y	Y	Y	Y			Y
Grenagh WwTP Storm Tank SWO	Y	Y	Y	Y	Y	Y	Y		
Watergrasshill WwTP SWO	Y	Y	Y	Y	Y	Y	Y		
Wallingstown PS SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Little Island Interchange PS SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Fitzpatricks PS 1 SWO	Y			Y	Y	Y	Y	Y	Y
Fitzpatricks PS 2 SWO	Y			Y	Y	Y	Y	Y	Y
Flaxfort Road PS SWO	Y	Y	Y						
Courtstown PS SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Priests Hill SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Glanmire PS CSO SWO		Y	Y	Y	Y	Y	Y	Y	Y
Eastgate PS SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y

SWO	Base			Development			Solution		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
58 South Ring Road SWO	Y								
59 Rosebank SWO	Y	Y	Y	Y	Y	Y	Y		
60 Riverbank Douglas SWO									
61 Douglas Hall Lawn SWO	Y	Y	Y	Y	Y	Y	Y		
75 South Douglas Road SWO	Y	Y	Y	Y	Y	Y	Y		
72 Belgard Downs SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Glencurrig PS SWO	Y								
02 Eikpa Lodge Sundays Well SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
03 Hazelhurst Sundays Well SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
04 Wyse Hill SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
05 Rock Cottages North Mall SWO	Y	Y	Y						
06 Shandon Street SWO	Y	Y	Y						
07 John Redmond Street SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
08 Upper John Street SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
10 Gerald Griffin Street SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
13 Wherelands Lane SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
14 Pophams Road SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
18 Thomas Davis Street SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
21 Fever Hospital Steps SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
22 Hardwick Street SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
23 Bridge Street SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
24 York Street SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
27 Grattan Hill SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
28 Beales Hill SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
30 Silversprings Lane SWO	Y	Y	Y						
62 Sunview Place East SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Sundays Well PS SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Kingsley PS SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
R843 SWO		Y	Y	Y	Y	Y	Y	Y	Y
Tivoli PS EO SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Bellevue PSEO SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Horgans Quay CSO SWO	Y	Y	Y	Y					
SW67724106 SWO	Y			Y	Y	Y	Y	Y	Y
33 Park Avenue SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
35 Boreenmanna Road (Ashton) SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
37 Victoria Hospital SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
41 Mary Street SWO	Y	Y	Y						
42 Travers Street SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y

SWO	Base			Development			Solution		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
43 Barrack Street SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
44 Keysers Hill SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
45 St Finbarr's Place SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
47 ODonovan Rossa Road SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
48 Gaol Walk SWO	Y	Y	Y						
49 Woodbrook Gurrane Lane SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
50 Rossa Avenue PS SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
51 Skehard Road SWO				Y	Y	Y	Y	Y	Y
52 Glasheen Bridge SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
54 Flannerys Pub SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
64 Convent Road SWO	Y	Y	Y						
67 St Finbarrs Hospital SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Atlantic Pond PS PS01 SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Gillabbey Pump Station Overflow SWO	Y	Y	Y						
Coal Quay PS PS20 SWO	Y			Y	Y	Y	Y	Y	Y
Grand Parade PS PS21 SWO	Y								
Donscourt PS SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Wilton PS SWO		Y	Y	Y	Y	Y	Y	Y	Y
Curraheen PS 1 SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Curraheen PS 2 SWO	Y			Y	Y	Y	Y	Y	Y
Crosses Green PS SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Stratton Pines PS SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Castle Avenue PS SWO		Y	Y	Y	Y	Y	Y	Y	Y
Mahon South PS SWO		Y	Y	Y	Y	Y	Y	Y	Y
Mahon North PSEO SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Jn Dunbar ST SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Woodhaven PS EO SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Halting Site Carrigrohane PS EO SWO	Y			Y	Y	Y	Y	Y	Y
Curraheen (Dog Track) PS SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Crosses Green PS No 2 SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Riverview Estate (SW68737602) (Dual MH) SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Anglesea Road 1 SWO	Y								
Anglesea Road 2 SWO	Y								
Assumption Road SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Bishop Street SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cathedral Walk SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Convent Avenue SWO	Y	Y	Y						

SWO	Base			Development			Solution		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
Glendale SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
High Street SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Lower Glanmire Road SWO	Y	Y	Y		Y	Y	Y	Y	Y
Popes Road SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Riverview Estate 1 (Dual MH) SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Southern Road SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Summerhill North SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Summerhill South SWO	Y	Y	Y						
Turner's Cross SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ursuline Convent SWO	Y	Y	Y						
Bessborough WwPS SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Eastgate WwPS SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Railway Yard WwPS SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Church Hill SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Church View 1 SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Church View 2 SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Carrigrohane WwPS SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Leesdale WwPS SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Maglin WwPS SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Powdermill WwPS SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ballincollig WwTP Storm Tank SWO	Y	Y	Y	Y	Y	Y	Y	Y	Y

A.1.2 Septic Tank Loads

Table A-2 Septic Tank Number, Flow and Load

Name	Number of Septic Tanks			Flow m³/s	EC		IE	
	50 m	100 m	200 m		Load (EC/s)	Conc (EC/100ml)	Load (IE/s)	Conc (IE/100ml)
Fountainstown caravan park ST	22	54	118	6.29E-04	1.64E+06	2.61E+05	2.74E+05	4.37E+04
Fountainstown 1 ST	19	53	77	4.83E-04	1.42E+06	2.95E+05	2.38E+05	4.93E+04
Fountainstown 2 ST	20	53	123	6.35E-04	1.51E+06	2.37E+05	2.52E+05	3.96E+04
Fountainstown 3 ST	1	15	33	1.59E-04	1.09E+05	6.85E+04	1.82E+04	1.14E+04
Fountainstown 4 ST	1	7	24	1.04E-04	8.97E+04	8.65E+04	1.50E+04	1.44E+04
Fountainstown 5 ST	22	65	121	6.74E-04	1.67E+06	2.47E+05	2.78E+05	4.13E+04
South Great Island A ST	0	2	3	1.62E-05	5.00E+03	3.09E+04	8.35E+02	5.16E+03
South Great Island B ST	2	6	10	5.83E-05	1.51E+05	2.60E+05	2.53E+04	4.34E+04
South Great Island C ST	10	23	36	2.24E-04	7.39E+05	3.30E+05	1.23E+05	5.52E+04
South Great Island D ST	2	7	15	7.78E-05	1.55E+05	1.99E+05	2.59E+04	3.33E+04

Name	Number of Septic Tanks			Flow	EC		IE	
	50 m	100 m	200 m	m ³ /s	Load (EC/s)	Conc (EC/100ml)	Load (IE/s)	Conc (IE/100ml)
East Passage A ST	2	7	7	5.19E-05	1.53E+05	2.94E+05	2.55E+04	4.91E+04
East Passage B ST	13	13	13	1.26E-04	9.15E+05	7.24E+05	1.53E+05	1.21E+05
East Passage C ST	0	2	2	1.30E-05	4.70E+03	3.62E+04	7.84E+02	6.05E+03
East Passage D ST	6	7	8	6.81E-05	4.25E+05	6.25E+05	7.10E+04	1.04E+05
East Passage E ST	5	8	11	7.78E-05	3.60E+05	4.63E+05	6.01E+04	7.73E+04
East Passage F ST	13	15	15	1.39E-04	9.20E+05	6.60E+05	1.54E+05	1.10E+05
East Passage G ST	12	27	37	2.46E-04	8.83E+05	3.59E+05	1.47E+05	5.99E+04
North channel A ST	0	1	13	4.54E-05	6.02E+03	1.33E+04	1.01E+03	2.22E+03
North channel B ST	6	7	7	6.48E-05	4.25E+05	6.55E+05	7.09E+04	1.09E+05
North channel C ST	19	26	47	2.98E-04	1.36E+06	4.56E+05	2.27E+05	7.62E+04
South Great Island E ST	8	22	82	3.63E-04	6.14E+05	1.69E+05	1.03E+05	2.83E+04
South Great Island F ST	0	1	3	1.30E-05	2.96E+03	2.28E+04	4.94E+02	3.81E+03
South Great Island G ST	0	2	5	2.27E-05	5.61E+03	2.48E+04	9.38E+02	4.13E+03
East Passage K ST	1	2	2	1.62E-05	7.28E+04	4.49E+05	1.21E+04	7.50E+04
North Channel D ST	1	1	4	1.94E-05	7.13E+04	3.67E+05	1.19E+04	6.13E+04
North Channel E ST	2	3	3	2.59E-05	1.43E+05	5.52E+05	2.39E+04	9.22E+04
North Channel F ST	1	1	4	1.94E-05	7.13E+04	3.67E+05	1.19E+04	6.13E+04
North Channel G ST	2	3	3	2.59E-05	1.43E+05	5.52E+05	2.39E+04	9.22E+04
North Channel H ST	0	0	1	3.24E-06	3.06E+02	9.45E+03	5.11E+01	1.58E+03
North Channel I ST	0	1	1	6.48E-06	2.35E+03	3.62E+04	3.92E+02	6.05E+03
North Channel J ST	0	1	1	6.48E-06	2.35E+03	3.62E+04	3.92E+02	6.05E+03
North Channel K ST	2	4	5	3.56E-05	1.46E+05	4.09E+05	2.44E+04	6.83E+04
North Channel L ST	0	2	16	5.83E-05	8.98E+03	1.54E+04	1.50E+03	2.57E+03
North Channel M ST	1	1	1	9.72E-06	7.04E+04	7.24E+05	1.18E+04	1.21E+05
North Channel N ST	1	2	2	1.62E-05	7.28E+04	4.49E+05	1.21E+04	7.50E+04
North Channel O ST	1	1	1	9.72E-06	7.04E+04	7.24E+05	1.18E+04	1.21E+05
North Channel P ST	0	1	2	9.72E-06	2.65E+03	2.73E+04	4.43E+02	4.56E+03
North Channel Q ST	0	1	1	6.48E-06	2.35E+03	3.62E+04	3.92E+02	6.05E+03
Owenacurra 1 ST	1	4	4	2.92E-05	7.74E+04	2.66E+05	1.29E+04	4.43E+04
Owenacurra 2 ST	0	0	1	3.24E-06	3.06E+02	9.45E+03	5.11E+01	1.58E+03
East passage H ST	0	1	1	6.48E-06	2.35E+03	3.62E+04	3.92E+02	6.05E+03
East passage I ST	1	0	1	6.48E-06	6.84E+04	1.05E+06	1.14E+04	1.76E+05
East passage J ST	8	9	9	8.43E-05	5.66E+05	6.71E+05	9.45E+04	1.12E+05

A.1.3 Industrial Source loads

Table A-3 Industrial Sources, Flows and Concentrations

Industrial source	Flow in permit (m³/s)	ELV (EC/100ml)
Cois Fota Owners Management Co Ltd	1.16E-04	0
East Cork Oil Broomfield West Midleton (WP (W) 02/87)	2.08E-04	0
Dept of Defence LOGS HQ Naval Base Haulbowline WwTP 1 Emission Point 1	1.85E-03	250
Dept of Defence LOGS HQ Naval Base Haulbowline WwTP 5 Emission Point 2	2.31E-04	250
The Island Crematorium Ltd Mocklerstown House Clerihan	4.63E-05	0
Spike Island Development Ltd Spike Island Cork Harbour	1.16E-04	0
Roadstone Ltd Carrigtwohill	3.24E-01	0
Trabolgan Holiday Centre Trabolgan	4.05E-03	250
Thermo Fisher Scientific Cork Limited	1.50E-02	0
Hovione Limited	2.08E-02	0
Recordati Ireland Limited	1.16E-03	0
Novartis Ringaskiddy Limited 1	1.04E-02	0
Novartis Ringaskiddy Limited 2	2.31E-03	0
Janssen Sciences Ireland UC	1.39E-02	0
Pfizer Ireland Pharmaceuticals Ringaskiddy	3.36E-02	0
BioMarin International Ltd	5.50E-03	0
Marinchem Limited	3.47E-03	0
Irish Distillers Limited	5.79E-02	250
Dairygold TINE Ltd	4.63E-02	250
Electricity Supply Board Aghada 1	2.31E-05	0
Electricity Supply Board Aghada 4	8.68E-03	0
Irving Oil Whitegate Refinery Limited	1.39E-01	0
Bord Gais Energy Ltd	6.94E-03	0

A.1.4 Misconnection Loads

Table A-4 Details of St Patrick's Bridge Misconnection

Location	Type of Loading	Loading (l/head/day)	No. of Heads	Foul Flow (l/day)	Foul Flow (m3/s)
Fern & Slon Villas, Sheares Street	Domestic Dwellings	150	39.2	5,880.0	0.00068
Little Hanover Street	Snack bars & bar meals	15	100	1,500.0	0.00017
Washington Street - Apartment	Domestic Dwellings	150	2.45	367.5	0.00004
Washington Street - The Shine shop	Office/factory without canteen	50	3	150.0	0.00002
Fenn's Quay, Sheares Street - Apartment	Domestic Dwelling	150	2.45	367.5	0.00004
Fenn's Quay, Sheares Street - Solicitor's office	Office/factory without canteen	50	4	200.0	0.00002
James Street - Domino's Pizza	Fast Food Meal	12	10	120.0	0.00001
James Street - Apartments	Domestic Dwelling	150	2.45	367.5	0.00004
Hanover Street	Domestic Dwelling	150	24.5	3,675.0	0.00043
Liberty Street - 8a - Courthouse	Office with canteen	100	60	6,000.0	0.00069
Liberty Street - 8b - St Francis Church	Full Time Day Staff	90	2	180.0	0.00002
Liberty Street - 8c - St Francis Church	Full Time Day Staff	90	2	180.0	0.00002
Liberty Street - 8d - Liberty Street House	Office without canteen	50	25	1,250.0	0.00014
North/South Main Street Junction - Apartment	Domestic Dwellings	150	249.9	37,485.0	0.00434
North/South Main Street Junction - Offices	Full Time Day Staff	150	78	11,700.0	0.00135
North/South Main Street Junction - Bars/restaurants	Non-residential with canteen	90	237.1	21,339.0	0.00247
South Main Street - Classic Bar	Snack bars & bar meals	15	75	1,125.0	0.00013
South Main Street - Tattoo Zoo	Full time day staff	90	2	180.0	0.00002
South Main Street - Apartment	Domestic Dwellings	150	12.25	1,837.5	0.00021
St. Augustine Street - 11a No.6 South Main Street - Office	Office/factory without canteen	50	5	250.0	0.00003
St. Augustine Street - 11a No.6 South Main Street - Apartment	Domestic Dwellings	150	2.45	367.5	0.00004

Location	Type of Loading	Loading (l/head/day)	No. of Heads	Foul Flow (l/day)	Foul Flow (m3/s)
St. Augustine Street - 11b Warehouse	Office/factory without canteen	100	10	1,000.0	0.00012
St. Augustine Street - 11c Warehouse	Office/factory without canteen	100	10	1,000.0	0.00012
Grand Parade / St. Patrick's Street Junction - McDonald's	Fast Food Meal	12	240	2,880.0	0.00033
Marlboro Street - Thomond Bar	Snack bars & bar meals	15	100	1,500.0	0.00017
Academy Street - Opera Lane Retail Unit a	Full time Day Staff	90	10	900.0	0.00010
Academy Street - Opera Lane Retail Unit b	Full time Day Staff	90	10	900.0	0.00010
Little William Street - The Savoy Retail Unit a	Full time Day Staff	90	7.5	675.0	0.00008
Little William Street - The Savoy Retail Unit b	Full time Day Staff	90	7.5	675.0	0.00008
Little William Street - The Savoy Retail Unit c	Full time Day Staff	90	7.5	675.0	0.00008
Little William Street - The Savoy Retail Unit d	Full time Day Staff	90	7.5	675.0	0.00008
Crane Lane / South Mall Street Junction - Apartments	Domestic Dwellings	150	60	9,000.0	0.00104
Morrison's Quay / South Mall Street Junction - Irish Passport Office	Office/factory without canteen	100	457.2	45,720.0	0.00529
French Church Street - 18a Moderne Shopping Complex	Full time day staff	90	10	900.0	0.00010
French Church Street - 18b Ulster Bank	Full time day staff	90	15	1,350.0	0.00016
French Church Street - Various Offices	Office/factory without canteen	50	30	1,500.0	0.00017
French Church Street - Various Restaurants	Restaurants - Full Meals	30	50	1,500.0	0.00017
French Church Street - Various Bars	Patrons	12	75	900.0	0.00010

A.1.5 Model Input Loads

Table A-5 BW Input EC Loads

SWO	Base (cfu/s)			Development (cfu/s)			Solution (cfu/s)		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
Carrirennan WwTP	2.76E+11	2.76E+11	2.76E+11	2.76E+11	2.76E+11	2.76E+11	2.76E+11	2.76E+11	2.76E+11



SWO	Base (cfu/s)			Development (cfu/s)			Solution (cfu/s)		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
Atlantic Pond PS PS01 SWO	7.58E+10	3.09E+10	4.16E+10	7.76E+09	1.07E+10	1.17E+10	2.88E+09	3.31E+08	1.19E+10
Whitegate Aghada WwTP	7.03E+10	7.03E+10	7.03E+10	7.03E+10	7.03E+10	7.03E+10	7.03E+10	7.03E+10	7.03E+10
Shanbally WwTP	4.42E+10	4.42E+10	4.42E+10	4.42E+10	4.42E+10	4.42E+10	4.42E+10	4.42E+10	4.42E+10
Carrigtwohill WwTP	4.34E+10	4.34E+10	4.34E+10	4.34E+10	4.34E+10	4.34E+10	4.34E+10	4.34E+10	4.34E+10
Grand Parade PS PS21 SWO	2.55E+10								
Coal Quay PS PS20 SWO	1.38E+10			2.64E+10	2.71E+10	2.20E+10	6.29E+07	4.49E+07	2.97E+08
River Curagheen Wet	1.32E+10	1.36E+10	1.50E+10	1.32E+10	1.36E+10	1.50E+10	1.32E+10	1.36E+10	1.50E+10
Ballick No 2 SWO	9.21E+09	9.95E+09	1.05E+10	1.04E+10	1.01E+10	1.08E+10	1.27E+08	1.65E+08	2.57E+08
River Owenboy Wet	6.52E+09	6.60E+09	7.17E+09	6.52E+09	6.60E+09	7.17E+09	6.52E+09	6.60E+09	7.17E+09
Summerhill North SWO	6.52E+09	4.49E+08	5.12E+08	5.57E+08	5.74E+08	5.09E+08	2.45E+08	2.54E+08	4.33E+08
10 Gerald Griffin Street SWO	6.00E+09	1.93E+08	2.05E+08	2.12E+08	2.20E+08	2.00E+08	2.09E+08	2.20E+08	3.68E+08
49 Woodbrook Gurrane Lane SWO	4.42E+09	0.00E+00	0.00E+00	1.68E+06	1.63E+06	1.43E+06	1.68E+06	1.67E+06	2.89E+06
13 Wherelands Lane SWO	4.31E+09	1.21E+08	1.24E+08	1.41E+08	1.44E+08	1.40E+08	1.44E+08	1.48E+08	3.11E+08
Horgans Quay CSO SWO	3.92E+09	0.00E+00	0.00E+00	1.67E+09					
River Glashaboy Wet	3.83E+09	3.88E+09	4.23E+09	3.83E+09	3.88E+09	4.23E+09	3.83E+09	3.88E+09	4.23E+09
River Lee Wet Lower	3.74E+09	3.80E+09	4.16E+09	3.74E+09	3.80E+09	4.16E+09	3.74E+09	3.80E+09	4.16E+09
Blarney Storm Tank SWO	3.41E+09	9.47E+09	1.16E+10	5.58E+09	9.47E+09	1.16E+10	0.00E+00	0.00E+00	3.55E+07
River Dungourney Wet	3.09E+09	3.12E+09	3.39E+09	3.09E+09	3.12E+09	3.39E+09	3.09E+09	3.12E+09	3.39E+09
Salene WwTP	3.01E+09	3.01E+09	3.01E+09	3.01E+09	3.01E+09	3.01E+09	3.01E+09	3.01E+09	3.01E+09
52 Glasheen Bridge SWO	2.82E+09	3.81E+07	3.36E+07	3.15E+07	3.30E+07	3.37E+07	3.14E+07	2.81E+07	2.88E+07
71 Carrigrennan WWTW 3DWF SWO	2.69E+09	4.42E+10	6.86E+10						
Bishop Street SWO	2.36E+09	2.75E+07	2.78E+07	2.94E+07	2.91E+07	2.79E+07	2.94E+07	2.90E+07	3.99E+07
05 Rock Cottages North Mall SWO	2.20E+09	3.63E+08	3.70E+08						

SWO	Base (cfu/s)			Development (cfu/s)			Solution (cfu/s)		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
50 Rossa Avenue PS SWO	2.12E+09	3.56E+07	3.47E+07	7.53E+07	7.63E+07	7.06E+07	7.53E+07	7.65E+07	1.15E+08
59 Rosebank SWO	1.85E+09	1.49E+07	1.22E+07	3.66E+07	2.16E+07	2.41E+07	3.66E+07		
Southern Road SWO	1.75E+09	5.93E+08	6.23E+08	6.32E+08	6.77E+08	6.17E+08	4.39E+08	4.75E+08	1.27E+09
North channel C ST	1.74E+09	1.74E+09	1.74E+09	1.74E+09	1.74E+09	1.74E+09	1.74E+09	1.74E+09	1.74E+09
33 Park Avenue SWO	1.63E+09	1.25E+08	1.31E+08	2.81E+08	2.83E+08	2.58E+08	2.81E+08	2.83E+08	6.07E+08
River Owenboy Dry	1.63E+09	1.65E+09	1.79E+09	1.63E+09	1.65E+09	1.79E+09	1.63E+09	1.65E+09	1.79E+09
River Lee Wet Upper	1.60E+09	1.63E+09	1.78E+09	1.60E+09	1.63E+09	1.78E+09	1.60E+09	1.63E+09	1.78E+09
River Owenacurra Wet	1.53E+09	1.54E+09	1.68E+09	1.53E+09	1.54E+09	1.68E+09	1.53E+09	1.54E+09	1.68E+09
River Minane Wet	1.52E+09	1.53E+09	1.67E+09	1.52E+09	1.53E+09	1.67E+09	1.52E+09	1.53E+09	1.67E+09
61 Douglas Hall Lawn SWO	1.46E+09	1.67E+07	1.73E+07	5.31E+08	5.32E+08	4.53E+08	4.19E+07		
River Shournagh Wet Lower	1.44E+09	1.49E+09	1.64E+09	1.44E+09	1.49E+09	1.64E+09	1.44E+09	1.49E+09	1.64E+09
River Curagheen Dry	1.42E+09	1.38E+09	1.37E+09	1.42E+09	1.38E+09	1.37E+09	1.42E+09	1.38E+09	1.37E+09
Maglin WwPS SWO	1.36E+09	1.74E+09	1.50E+09	1.36E+09	1.50E+09	1.50E+09	9.58E+06	6.02E+08	8.25E+07
Ballick No 1 2 SWO	1.33E+09	1.46E+09	1.44E+09	1.45E+09	1.47E+09	1.47E+09	1.31E+09	1.32E+09	1.34E+09
East Passage F ST	1.18E+09	1.18E+09	1.18E+09	1.18E+09	1.18E+09	1.18E+09	1.18E+09	1.18E+09	1.18E+09
East Passage B ST	1.17E+09	1.17E+09	1.17E+09	1.17E+09	1.17E+09	1.17E+09	1.17E+09	1.17E+09	1.17E+09
Ballick No 1 4 SWO	1.14E+09	1.26E+09	1.23E+09	1.24E+09	1.27E+09	1.26E+09	1.09E+09	1.11E+09	1.13E+09
East Passage G ST	1.13E+09	1.13E+09	1.13E+09	1.13E+09	1.13E+09	1.13E+09	1.13E+09	1.13E+09	1.13E+09
Ballick No 1 5 SWO	1.03E+09	1.14E+09	1.11E+09	1.12E+09	1.14E+09	1.14E+09	9.75E+08	9.91E+08	1.01E+09
48 Gaol Walk SWO	1.02E+09	7.58E+04	8.52E+04						
Cloyne WwTP	9.47E+08	9.47E+08	9.47E+08	9.47E+08	9.47E+08	9.47E+08	9.47E+08	9.47E+08	9.47E+08
South Great Island C ST	9.45E+08	9.45E+08	9.45E+08	9.45E+08	9.45E+08	9.45E+08	9.45E+08	9.45E+08	9.45E+08
Southern Road No 1 SWO	9.31E+08								

SWO	Base (cfu/s)			Development (cfu/s)			Solution (cfu/s)		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
06 Shandon Street SWO	9.28E+08	8.43E+06	9.36E+06						
35 Boreenmanna Road (Ashton) SWO	9.23E+08	2.16E+08	2.20E+08	2.28E+08	2.37E+08	2.20E+08	2.28E+08	2.38E+08	3.52E+08
River Bride Lee Wet Lower	8.51E+08	8.77E+08	9.63E+08	8.51E+08	8.77E+08	9.63E+08	8.51E+08	8.77E+08	9.63E+08
South Great Island E ST	7.86E+08	7.86E+08	7.86E+08	7.86E+08	7.86E+08	7.86E+08	7.86E+08	7.86E+08	7.86E+08
Glendale SWO	7.71E+08	1.65E+08	1.56E+08	1.65E+08	1.66E+08	1.52E+08	1.65E+08	1.66E+08	2.87E+08
Summerhill South SWO	7.65E+08	0.00E+00	0.00E+00						
Ballick No 1 1 SWO	7.61E+08	8.56E+08	8.09E+08	8.24E+08	8.54E+08	8.41E+08	6.73E+08	6.88E+08	7.12E+08
02 Eikpa Lodge Sundays Well SWO	7.51E+08	3.18E+07	3.63E+07	3.70E+07	4.20E+07	1.98E+07	3.06E+07	2.64E+07	5.79E+07
East passage J ST	7.23E+08	7.23E+08	7.23E+08	7.23E+08	7.23E+08	7.23E+08	7.23E+08	7.23E+08	7.23E+08
Ballincollig WwTP Storm Tank SWO	6.24E+08	7.69E+08	6.55E+08	6.24E+08	6.55E+08	6.55E+08	4.90E+08	1.10E+09	1.10E+09
River Shournagh Wet Upper	6.15E+08	6.39E+08	7.02E+08	6.15E+08	6.39E+08	7.02E+08	6.15E+08	6.39E+08	7.02E+08
Turner's Cross SWO	6.13E+08	2.48E+08	2.36E+08	2.55E+08	2.64E+08	2.39E+08	1.33E+08	1.33E+08	2.16E+08
River Lee Dry Lower	6.00E+08	5.92E+08	5.88E+08	6.00E+08	5.92E+08	5.88E+08	6.00E+08	5.92E+08	5.88E+08
East Passage D ST	5.44E+08	5.44E+08	5.44E+08	5.44E+08	5.44E+08	5.44E+08	5.44E+08	5.44E+08	5.44E+08
North channel B ST	5.43E+08	5.43E+08	5.43E+08	5.43E+08	5.43E+08	5.43E+08	5.43E+08	5.43E+08	5.43E+08
47 ODonovan Rossa Road SWO	5.14E+08	2.23E+06	6.19E+06	4.97E+07	5.04E+07	4.56E+07	4.96E+07	5.02E+07	8.81E+07
East Passage E ST	4.60E+08	4.60E+08	4.60E+08	4.60E+08	4.60E+08	4.60E+08	4.60E+08	4.60E+08	4.60E+08
River Dungourney Dry	4.30E+08	4.19E+08	4.16E+08	4.30E+08	4.19E+08	4.16E+08	4.30E+08	4.19E+08	4.16E+08
River Glashaboy Dry	4.13E+08	4.01E+08	3.92E+08	4.13E+08	4.01E+08	3.92E+08	4.13E+08	4.01E+08	3.92E+08
River Minane Dry	3.79E+08	3.83E+08	4.16E+08	3.79E+08	3.83E+08	4.16E+08	3.79E+08	3.83E+08	4.16E+08
COBH Old Town Hall SWO	3.73E+08	3.58E+08	3.33E+08	3.73E+08	3.33E+08	3.33E+08	6.90E+08	8.79E+08	6.24E+08
River Bride Lee Wet Upper	3.65E+08	3.76E+08	4.13E+08	3.65E+08	3.76E+08	4.13E+08	3.65E+08	3.76E+08	4.13E+08
62 Sunview Place East SWO	3.37E+08	4.37E+07	4.27E+07	4.44E+07	4.55E+07	4.26E+07	4.03E+07	4.20E+07	6.77E+07

SWO	Base (cfu/s)			Development (cfu/s)			Solution (cfu/s)		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
14 Pophams Road SWO	3.34E+08	1.06E+07	1.08E+07	1.11E+07	1.06E+07	1.08E+07	1.18E+07	1.07E+07	1.28E+07
River Ringabella Wet	3.29E+08	3.33E+08	3.62E+08	3.29E+08	3.33E+08	3.62E+08	3.29E+08	3.33E+08	3.62E+08
37 Victoria Hospital SWO	3.16E+08	8.30E+05	9.88E+05	1.14E+06	9.28E+05	8.86E+05	1.19E+06	1.09E+06	1.30E+06
River Farrannamanagh Wet	2.68E+08	2.71E+08	2.95E+08	2.68E+08	2.71E+08	2.95E+08	2.68E+08	2.71E+08	2.95E+08
Ballinacurra No 1 PS SWO	2.68E+08	3.85E+08	3.42E+08	7.30E+07	7.16E+07	7.30E+07	7.30E+07	8.97E+07	7.61E+07
Carringtonhill WwTP SWO	2.68E+08	6.70E+08		2.59E+08	6.66E+08	6.19E+08	3.56E+08	7.19E+08	8.43E+08
Drurys Ave SWO	2.62E+08	2.80E+08	2.79E+08	2.87E+08	2.85E+08	2.87E+08			
River Lee Dry Upper	2.57E+08	2.54E+08	2.52E+08	2.57E+08	2.54E+08	2.52E+08	2.57E+08	2.54E+08	2.52E+08
75 South Douglas Road SWO	2.32E+08	9.19E+06	1.36E+07	2.24E+07	9.17E+06	1.37E+07	2.24E+07		
River Bride Wet	2.17E+08	2.23E+08	2.45E+08	2.17E+08	2.23E+08	2.45E+08	2.17E+08	2.23E+08	2.45E+08
River Owenacurra Dry	2.14E+08	2.08E+08	2.06E+08	2.14E+08	2.08E+08	2.06E+08	2.14E+08	2.08E+08	2.06E+08
67 St Finbarrs Hospital SWO	2.13E+08	7.85E+07	7.50E+07	8.21E+07	8.36E+07	7.44E+07	8.21E+07	8.34E+07	1.85E+08
Fountainstown 5 ST	2.13E+08	2.13E+08	2.13E+08	2.13E+08	2.13E+08	2.13E+08	2.13E+08	2.13E+08	2.13E+08
Fountainstown caravan park ST	2.10E+08	2.10E+08	2.10E+08	2.10E+08	2.10E+08	2.10E+08	2.10E+08	2.10E+08	2.10E+08
South Great Island D ST	1.98E+08	1.98E+08	1.98E+08	1.98E+08	1.98E+08	1.98E+08	1.98E+08	1.98E+08	1.98E+08
East Passage A ST	1.95E+08	1.95E+08	1.95E+08	1.95E+08	1.95E+08	1.95E+08	1.95E+08	1.95E+08	1.95E+08
South Great Island B ST	1.94E+08	1.94E+08	1.94E+08	1.94E+08	1.94E+08	1.94E+08	1.94E+08	1.94E+08	1.94E+08
Courtstown PS SWO	1.93E+08	4.16E+07	4.59E+07	4.64E+06	9.00E+06	9.68E+06	4.64E+06	8.98E+06	7.39E+07
Fountainstown 2 ST	1.93E+08	1.93E+08	1.93E+08	1.93E+08	1.93E+08	1.93E+08	1.93E+08	1.93E+08	1.93E+08
North Channel K ST	1.86E+08	1.86E+08	1.86E+08	1.86E+08	1.86E+08	1.86E+08	1.86E+08	1.86E+08	1.86E+08
North Channel G ST	1.83E+08	1.83E+08	1.83E+08	1.83E+08	1.83E+08	1.83E+08	1.83E+08	1.83E+08	1.83E+08
North Channel E ST	1.83E+08	1.83E+08	1.83E+08	1.83E+08	1.83E+08	1.83E+08	1.83E+08	1.83E+08	1.83E+08
Fountainstown 1 ST	1.82E+08	1.82E+08	1.82E+08	1.82E+08	1.82E+08	1.82E+08	1.82E+08	1.82E+08	1.82E+08

SWO	Base (cfu/s)			Development (cfu/s)			Solution (cfu/s)		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
Minane WwTP	1.79E+08	1.79E+08	1.79E+08	1.79E+08	1.79E+08	1.79E+08	1.79E+08	1.79E+08	1.79E+08
Killeens WwTP Storm Tank SWO	1.76E+08			2.41E+08					
River Carrigtwohill Wet	1.76E+08	1.71E+08	1.67E+08	1.76E+08	1.71E+08	1.67E+08	1.76E+08	1.71E+08	1.67E+08
03 Hazelhurst Sundays Well SWO	1.72E+08	4.49E+07	4.41E+07	4.76E+07	4.99E+07	4.48E+07	4.87E+07	4.96E+07	8.06E+07
River Shournagh Dry Lower	1.58E+08	1.59E+08	1.60E+08	1.58E+08	1.59E+08	1.60E+08	1.58E+08	1.59E+08	1.60E+08
Kerry Pike WwPS SWO	1.55E+08	1.68E+08	1.84E+08	1.70E+08	1.68E+08	1.84E+08	2.08E+05	5.17E+05	9.63E+06
CARG Carrigaline Park (Att tank) SWO	1.52E+08	9.99E+08	6.20E+09	1.52E+08	6.20E+09	6.20E+09	0.00E+00	2.55E+07	2.31E+08
58 South Ring Road SWO	1.51E+08								
River Knocknamadderee Wet	1.24E+08	1.25E+08	1.36E+08	1.24E+08	1.25E+08	1.36E+08	1.24E+08	1.25E+08	1.36E+08
Priests Hill SWO	1.15E+08	1.94E+06	1.89E+06	1.97E+06	1.94E+06	1.93E+06	1.68E+06	1.94E+06	2.08E+06
54 Flannerys Pub SWO	1.06E+08	2.22E+07	2.20E+07	5.46E+07	5.63E+07	5.04E+07	5.46E+07	5.62E+07	8.88E+07
45 St Finbarr's Place SWO	1.04E+08	2.67E+06	2.75E+06	2.76E+06	2.68E+06	2.75E+06	2.76E+06	2.68E+06	3.45E+06
23 Bridge Street SWO	1.03E+08	1.50E+07	1.54E+07	1.71E+07	1.61E+07	1.55E+07	1.72E+07	1.63E+07	2.08E+07
Riversfield Estate SWO	9.96E+07	1.13E+08		1.13E+08	1.14E+08	1.39E+08			
Owenacurra 1 ST	9.91E+07	9.91E+07	9.91E+07	9.91E+07	9.91E+07	9.91E+07	9.91E+07	9.91E+07	9.91E+07
North Channel N ST	9.30E+07	9.30E+07	9.30E+07	9.30E+07	9.30E+07	9.30E+07	9.30E+07	9.30E+07	9.30E+07
East Passage K ST	9.30E+07	9.30E+07	9.30E+07	9.30E+07	9.30E+07	9.30E+07	9.30E+07	9.30E+07	9.30E+07
River Bride Lee Dry Lower	9.12E+07	8.87E+07	8.84E+07	9.12E+07	8.87E+07	8.84E+07	9.12E+07	8.87E+07	8.84E+07
North Channel F ST	9.12E+07	9.12E+07	9.12E+07	9.12E+07	9.12E+07	9.12E+07	9.12E+07	9.12E+07	9.12E+07
North Channel D ST	9.12E+07	9.12E+07	9.12E+07	9.12E+07	9.12E+07	9.12E+07	9.12E+07	9.12E+07	9.12E+07
North Channel O ST	9.00E+07	9.00E+07	9.00E+07	9.00E+07	9.00E+07	9.00E+07	9.00E+07	9.00E+07	9.00E+07
North Channel M ST	9.00E+07	9.00E+07	9.00E+07	9.00E+07	9.00E+07	9.00E+07	9.00E+07	9.00E+07	9.00E+07
21 Fever Hospital Steps SWO	9.00E+07	3.42E+03	4.71E+03	1.02E+04	4.66E+03	4.10E+03	8.96E+03	5.75E+03	1.50E+04

SWO	Base (cfu/s)			Development (cfu/s)			Solution (cfu/s)		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
Tivoli PS EO SWO	8.96E+07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ursuline Convent SWO	8.85E+07	2.80E+07	2.90E+07						
East passage I ST	8.74E+07	8.74E+07	8.74E+07	8.74E+07	8.74E+07	8.74E+07	8.74E+07	8.74E+07	8.74E+07
Fitzpatricks PS 2 SWO	8.65E+07			8.55E+07	1.08E+08	1.02E+08	6.88E+07	1.06E+08	2.32E+08
River Ringabella Dry	8.23E+07	8.33E+07	9.04E+07	8.23E+07	8.33E+07	9.04E+07	8.23E+07	8.33E+07	9.04E+07
Carrigrohane WwPS SWO	7.57E+07	8.48E+07	7.41E+07	7.57E+07	7.41E+07	7.41E+07	3.29E+07	6.04E+07	5.53E+07
22 Hardwick Street SWO	7.23E+07	1.75E+06	2.11E+06	2.19E+06	1.75E+06	2.11E+06	2.19E+06	1.72E+06	2.48E+06
42 Travers Street SWO	6.80E+07	1.62E+06	1.61E+06	2.06E+06	1.66E+06	1.85E+06	2.01E+06	1.86E+06	2.29E+06
River Shournagh Dry Upper	6.78E+07	6.82E+07	6.85E+07	6.78E+07	6.82E+07	6.85E+07	6.78E+07	6.82E+07	6.85E+07
River Farrannamanagh Dry	6.70E+07	6.78E+07	7.36E+07	6.70E+07	6.78E+07	7.36E+07	6.70E+07	6.78E+07	7.36E+07
44 Keyzers Hill SWO	5.70E+07	1.30E+07	1.28E+07	1.37E+07	1.42E+07	1.26E+07	1.37E+07	1.40E+07	1.80E+07
Convent Avenue SWO	5.46E+07	3.62E+05	5.28E+05						
Midleton WwTP	5.14E+07	5.14E+07	5.14E+07	5.14E+07	5.14E+07	5.14E+07	5.14E+07	5.14E+07	5.14E+07
COBH Dockyard SWO	5.03E+07	4.27E+07	6.81E+06	5.03E+07	6.81E+06	6.81E+06	1.83E+08	2.81E+08	1.39E+08
Cloghroe WwPS SWO	4.88E+07	1.74E+08	1.53E+08	1.55E+08	1.74E+08	1.53E+08	1.37E+07	1.29E+07	7.07E+07
41 Mary Street SWO	4.61E+07	1.23E+05	1.35E+05						
River Carrigtwohill Dry	4.39E+07	4.27E+07	4.17E+07	4.39E+07	4.27E+07	4.17E+07	4.39E+07	4.27E+07	4.17E+07
72 Belgard Downs SWO	4.08E+07	3.80E+08	3.67E+08	3.60E+08	3.65E+08	3.80E+08	3.60E+08	1.01E+09	3.93E+08
River Bride Lee Dry Upper	3.91E+07	3.80E+07	3.79E+07	3.91E+07	3.80E+07	3.79E+07	3.91E+07	3.80E+07	3.79E+07
Powdermill WwPS SWO	3.52E+07	3.75E+07	2.39E+07	3.52E+07	2.39E+07	2.39E+07	6.10E+06	1.67E+07	8.97E+06
Assumption Road SWO	3.52E+07	8.48E+06	9.06E+06	6.64E+06	7.76E+06	9.03E+06	6.66E+06	7.85E+06	1.22E+07
04 Wyse Hill SWO	3.40E+07	2.39E+06	2.41E+06	2.48E+06	2.39E+06	2.41E+06	2.46E+06	2.44E+06	3.61E+06
Ballygarvan WwTP SWO	3.23E+07	5.18E+07	6.77E+07	4.74E+07	5.18E+07	6.77E+07			

SWO	Base (cfu/s)			Development (cfu/s)			Solution (cfu/s)		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
River Knocknamadderee Dry	3.09E+07	3.13E+07	3.40E+07	3.09E+07	3.13E+07	3.40E+07	3.09E+07	3.13E+07	3.40E+07
Cathedral Walk SWO	3.05E+07	3.65E+06	4.07E+06	4.92E+06	3.91E+06	4.07E+06	4.92E+06	3.93E+06	4.71E+06
Old Cobh Road WWPS SWO	3.00E+07	6.42E+07		3.39E+07	6.81E+07	2.37E+08	0.00E+00	0.00E+00	0.00E+00
43 Barrack Street SWO	2.84E+07	4.18E+06	4.41E+06	4.73E+06	4.54E+06	4.38E+06	4.73E+06	4.61E+06	6.02E+06
07 John Redmond Street SWO	2.62E+07	1.42E+05	1.49E+05	1.51E+05	1.42E+05	1.49E+05	1.51E+05	1.45E+05	1.51E+05
River Bride Dry	2.33E+07	2.26E+07	2.25E+07	2.33E+07	2.26E+07	2.25E+07	2.33E+07	2.26E+07	2.25E+07
Gothic Bridge WwPS SWO	2.11E+07	3.04E+07	2.89E+07	2.10E+07	3.04E+07	2.89E+07	8.57E+05	1.40E+06	8.43E+06
64 Convent Road SWO	1.91E+07	1.66E+06	2.68E+06						
Great Wm O'Brien Street SWO	1.71E+07								
Popes Road SWO	1.71E+07	3.77E+06	3.36E+06	3.90E+06	3.05E+06	3.36E+06	3.88E+06	3.08E+06	4.15E+06
Old Yoghal Road Oakwood PS Beechwood Court PS SWO	1.70E+07	1.83E+07	1.06E+07	1.80E+07	1.84E+07	1.52E+07	1.81E+07	1.85E+07	1.15E+07
Ballinacurra No 2 PS SWO	1.67E+07	3.41E+07	2.01E+07	1.59E+07	3.37E+07	1.78E+07	1.83E+07	3.11E+07	1.82E+07
18 Thomas Davis Street SWO	1.64E+07	3.13E+06	3.71E+06	3.48E+06	3.24E+06	3.66E+06	3.46E+06	3.22E+06	4.73E+06
Greenhills WwPS SWO	1.61E+07								
Fountainstown 3 ST	1.39E+07	1.39E+07	1.39E+07	1.39E+07	1.39E+07	1.39E+07	1.39E+07	1.39E+07	1.39E+07
Leesdale WwPS SWO	1.29E+07	1.69E+07	5.92E+06	1.29E+07	5.92E+06	5.92E+06	1.07E+07	1.69E+07	5.64E+06
North Cobh WwTP	1.15E+07	1.15E+07	1.15E+07	1.15E+07	1.15E+07	1.15E+07	1.15E+07	1.15E+07	1.15E+07
North Channel L ST	1.15E+07	1.15E+07	1.15E+07	1.15E+07	1.15E+07	1.15E+07	1.15E+07	1.15E+07	1.15E+07
Fountainstown 4 ST	1.15E+07	1.15E+07	1.15E+07	1.15E+07	1.15E+07	1.15E+07	1.15E+07	1.15E+07	1.15E+07
Dwyers Road PS SWO	1.07E+07	1.49E+07	1.01E+07	1.17E+07	1.47E+07	1.42E+07	1.26E+08	1.58E+08	2.26E+08
Halfway Carpark SWO	1.05E+07	1.12E+07	1.04E+07	1.07E+07	1.12E+07	1.04E+07	1.06E+07		9.28E+04
MONK Monkstown SWO	9.41E+06	1.02E+07	4.77E+06	9.41E+06	4.77E+06	4.77E+06	1.42E+07	2.95E+07	
COBH Station Car Park SWO	9.40E+06	1.01E+07	1.02E+07	9.40E+06	1.02E+07	1.02E+07	2.57E+07	3.65E+07	1.96E+07

SWO	Base (cfu/s)			Development (cfu/s)			Solution (cfu/s)		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
RNSY Ringaskiddy Village SWO	9.07E+06	7.75E+06	6.68E+06	9.07E+06	6.68E+06	6.68E+06	2.82E+07	3.00E+07	2.03E+07
Anglesea Road 1 SWO	8.97E+06								
Elm Road SWO	8.43E+06	1.66E+07		8.99E+06	1.73E+07	1.00E+07	9.01E+06	1.73E+07	4.75E+06
North channel A ST	7.70E+06	7.70E+06	7.70E+06	7.70E+06	7.70E+06	7.70E+06	7.70E+06	7.70E+06	7.70E+06
South Great Island G ST	7.18E+06	7.18E+06	7.18E+06	7.18E+06	7.18E+06	7.18E+06	7.18E+06	7.18E+06	7.18E+06
CARG Crosshaven Road SWO	6.53E+06	6.43E+06	1.44E+07	6.53E+06	1.44E+07	1.44E+07	2.45E+07	2.72E+07	1.93E+07
30 Silversprings Lane SWO	6.51E+06	3.49E+08	4.15E+08						
South Great Island A ST	6.40E+06	6.40E+06	6.40E+06	6.40E+06	6.40E+06	6.40E+06	6.40E+06	6.40E+06	6.40E+06
East Passage C ST	6.01E+06	6.01E+06	6.01E+06	6.01E+06	6.01E+06	6.01E+06	6.01E+06	6.01E+06	6.01E+06
High Street SWO	5.77E+06	1.28E+05	7.27E+04	4.99E+04	1.07E+05	3.76E+04	0.00E+00	0.00E+00	0.00E+00
COBH Rushbrooke SWO	5.20E+06	2.59E+06	1.11E+06	5.20E+06	1.11E+06	1.11E+06	3.57E+06	5.90E+06	
Church Hill SWO	4.98E+06	7.58E+06	2.11E+06	4.98E+06	2.11E+06	2.11E+06	3.96E+06	7.08E+06	1.61E+06
North Cobh WwTP SWO	4.96E+06	4.64E+07	5.25E+07	4.96E+06	5.25E+07	5.25E+07	5.68E+06	9.76E+07	7.25E+07
Bessborough WwPS SWO	4.79E+06	6.37E+06	7.08E+06	1.82E+06	6.61E+06	7.08E+06	1.82E+06	6.62E+06	7.01E+06
08 Upper John Street SWO	4.75E+06	1.79E+05	1.90E+05	1.96E+05	1.80E+05	1.90E+05	1.95E+05	1.91E+05	1.99E+05
29 Trafalgar Hill SWO	4.53E+06			2.42E-02	2.40E-02	5.22E-02	0.00E+00	4.27E-02	1.45E-01
Church View 2 SWO	3.85E+06	5.56E+06	1.80E+06	3.85E+06	1.80E+06	1.80E+06	3.05E+06	5.54E+06	1.61E+06
South Great Island F ST	3.79E+06	3.79E+06	3.79E+06	3.79E+06	3.79E+06	3.79E+06	3.79E+06	3.79E+06	3.79E+06
North Channel P ST	3.39E+06	3.39E+06	3.39E+06	3.39E+06	3.39E+06	3.39E+06	3.39E+06	3.39E+06	3.39E+06
North Channel Q ST	3.00E+06	3.00E+06	3.00E+06	3.00E+06	3.00E+06	3.00E+06	3.00E+06	3.00E+06	3.00E+06
North Channel J ST	3.00E+06	3.00E+06	3.00E+06	3.00E+06	3.00E+06	3.00E+06	3.00E+06	3.00E+06	3.00E+06
East passage H ST	3.00E+06	3.00E+06	3.00E+06	3.00E+06	3.00E+06	3.00E+06	3.00E+06	3.00E+06	3.00E+06
North Channel I ST	3.00E+06	3.00E+06	3.00E+06	3.00E+06	3.00E+06	3.00E+06	3.00E+06	3.00E+06	3.00E+06

SWO	Base (cfu/s)			Development (cfu/s)			Solution (cfu/s)		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
Mahon North PSEO SWO	2.84E+06	1.22E-01	1.64E-01	1.93E-01	1.62E-01	1.70E-01	2.26E-01	1.81E-01	4.04E-01
Crosses Green PS No 2 SWO	2.76E+06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Railway Yard WwPS SWO	2.44E+06	9.36E+04	9.61E+04	9.40E+04	9.36E+04	9.61E+04	9.42E+04	9.45E+04	9.67E+04
GLEN Glenbrook SWO	1.81E+06	2.45E+06	0.00E+00	1.81E+06	0.00E+00	0.00E+00	2.20E+06	4.77E+06	4.26E-01
PSWT Passage West SWO	1.52E+06	3.39E+06	0.00E+00	1.52E+06	0.00E+00	0.00E+00	1.50E+06	3.79E+06	0.00E+00
CARG Church Road SWO	1.42E+06	2.54E+06	1.85E+06	1.42E+06	1.85E+06	1.85E+06	0.00E+00	5.80E+04	1.10E+05
Fitzpatricks PS 1 SWO	1.42E+06			6.45E+06	7.91E+06	8.45E+06	4.98E+06	7.86E+06	2.66E+07
Eastgate PS SWO	1.27E+06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
COBH Dock Cottages SWO	8.81E+05	0.00E+00	1.20E+05	8.81E+05	1.20E+05	1.20E+05	0.00E+00	0.00E+00	0.00E+00
PSWT Cork Road SWO	7.34E+05	1.61E+06	9.39E+06	7.34E+05	9.39E+06	9.39E+06	6.70E+05	1.69E+06	1.04E+07
Anglesea Road 2 SWO	6.59E+05								
City Printers PS SWO	5.94E+05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Roxboro Housing Estate PS SWO	5.20E+05	7.81E+05	2.99E+05	5.54E+05	7.80E+05	5.84E+05	5.53E+05	7.90E+05	2.95E+05
Glencurrig PS SWO	5.14E+05								
Eastgate WwPS SWO	4.08E+05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Owenacurra 2 ST	3.92E+05	3.92E+05	3.92E+05	3.92E+05	3.92E+05	3.92E+05	3.92E+05	3.92E+05	3.92E+05
North Channel H ST	3.92E+05	3.92E+05	3.92E+05	3.92E+05	3.92E+05	3.92E+05	3.92E+05	3.92E+05	3.92E+05
Jn Dunbar ST SWO	3.32E+05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cloyne Riverside WwPS SWO	2.86E+05	7.64E+05	0.00E+00	2.68E+05	7.64E+05	0.00E+00			
Donscourt PS SWO	2.12E+05	1.89E+05	2.67E+05	2.73E+05	2.64E+05	2.29E+05	2.73E+05	2.68E+05	4.61E+05
24 York Street SWO	1.94E+05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
The Rock PS SWO	1.26E+05	1.76E+05	6.48E+03	1.38E+05	1.58E+05	1.32E+05	1.34E+05	1.64E+05	1.03E+04
Cois Muileann WwPS SWO	8.14E+04	1.58E+05	2.63E+04	8.47E+04	1.58E+05	2.63E+04	8.49E+04	1.68E+05	

SWO	Base (cfu/s)			Development (cfu/s)			Solution (cfu/s)		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
Woodhaven PS EO SWO	7.58E+04	6.24E+04	9.22E+04	9.32E+04	8.76E+04	7.86E+04	9.32E+04	0.00E+00	0.00E+00
Crosses Green PS SWO	7.50E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lower Glanmire Road No 112 N8 SWO	4.92E+04	1.04E+06	1.07E+06						
Oakwood PS SWO	2.60E+04	2.26E+04	2.16E+04	2.50E+04	2.55E+04	3.13E+04	3.20E+04	2.76E+04	2.32E+04
Riverview Estate 1 (Dual MH) SWO	1.39E+04	1.14E+04	1.71E+04	1.71E+04	1.72E+04	1.42E+04	1.71E+04	1.68E+04	2.56E+04
Church View 1 SWO	9.38E+03	1.08E+04	7.97E+03	9.38E+03	7.97E+03	7.97E+03	8.29E+03	7.23E+03	4.66E+03
Dept of Defence LOGS HQ Naval Base Haulbowline WwTP 1 Emission Point 1 Ind	6.17E+03	6.17E+03	6.17E+03	6.17E+03	6.17E+03	6.17E+03	6.17E+03	6.17E+03	6.17E+03
Roxboro Mews PS SWO	6.09E+03	6.04E+03	6.09E+03	6.88E+03	6.67E+03	6.58E+03	7.98E+03	7.28E+03	6.12E+03
Trabolgan Holiday Centre Trabolgan Ind	4.51E+03	4.51E+03	4.51E+03	4.51E+03	4.51E+03	4.51E+03	4.51E+03	4.51E+03	4.51E+03
Lower Glanmire Road SWO	1.45E+03	1.61E+03	1.64E+03		2.02E+03	1.46E+03	1.93E+03	1.96E+03	2.91E+03
Dept of Defence LOGS HQ Naval Base Haulbowline WwTP 5 Emission Point 2 Ind	1.72E+02	1.72E+02	1.72E+02	1.72E+02	1.72E+02	1.72E+02	1.72E+02	1.72E+02	1.72E+02
27 Grattan Hill SWO	5.09E+01	7.10E+05	8.13E+05	7.51E+05	7.01E+05	8.06E+05	4.10E+05	3.92E+05	5.00E+05
Wallingstown PS SWO	3.66E+01	4.59E+01	1.12E+02	3.38E+01	4.85E+01	5.54E+01	3.27E+01	2.35E+01	5.21E+01
28 Beales Hill SWO	1.79E-01	4.14E+05	4.14E+05	4.16E+05	4.14E+05	4.14E+05	4.15E+05	4.19E+05	4.19E+05
Barryscourt WWPS EO SWO	0.00E+00	0.00E+00		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Stratton Pines PS SWO	0.00E+00	1.26E+05	1.34E+05	1.44E+05	1.49E+05	1.30E+05	1.29E+05	1.32E+05	1.46E+05
BioMarin International Ltd Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cow's Cross WwPS SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Spike Island Development Ltd Spike Island Cork Harbour Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RNSY Coolmore Cross SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Electricity Supply Board Aghada 1 Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Curraheen PS 1 SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Electricity Supply Board Aghada 4 Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

SWO	Base (cfu/s)			Development (cfu/s)			Solution (cfu/s)		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
East Cork Oil Broomfield West Midleton (WP (W) 02/87) Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
XHAV Carpark PS 1 SWO	0.00E+00	0.00E+00	1.00E+07	0.00E+00	1.00E+07	1.00E+07	0.00E+00	0.00E+00	0.00E+00
The Island Crematorium Ltd Mocklerstown House Clerihan Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hovione Limited Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Little Island Interchange PS SWO	0.00E+00	1.08E+06	2.62E+06	9.17E+05	1.13E+06	2.81E+06	1.44E+06	1.34E+06	2.30E+07
CARG Dunnes network overflow SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
IDA No1 WWPS ESO SWO	0.00E+00	0.00E+00		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Thermo Fisher Scientific Cork Limited Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sundays Well PS SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Recordati Ireland Limited Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kingsley PS SWO	0.00E+00	2.76E+06	2.85E+06	2.85E+06	2.76E+06	2.85E+06	2.84E+06	2.83E+06	3.20E+06
Riverview Estate (SW68737602) (Dual MH) SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Halting Site Carrigrohane PS EO SWO	0.00E+00			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bellevue PSEO SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cois Fota Owners Management Co Ltd Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Curraheen (Dog Track) PS SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Flaxfort Road PS SWO	0.00E+00	7.81E+07	1.01E+08						
Cloyne Dun Orga SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00			
Irving Oil Whitegate Refinery Limited Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lynch's Quay WwPS SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dripsey WwTP Inlet SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00			0.00E+00
XHAV The Glen PS SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.31E+05	1.26E+08	1.13E+08
Curraheen PS 2 SWO	0.00E+00			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

SWO	Base (cfu/s)			Development (cfu/s)			Solution (cfu/s)		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
Pfizer Ireland Pharmaceuticals Ringaskiddy Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Watergrasshill WwTP SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
Grenagh WwTP Storm Tank SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
Minane Bridge SW01 SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00			
Roadstone Ltd Carrigtwohill Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dairygold TINE Ltd Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Church Lane SWO	0.00E+00	0.00E+00		0.00E+00	8.13E-03	0.00E+00	0.00E+00	7.76E-03	0.00E+00
Cork Ring Bandon Road WwPS SWO	0.00E+00								
Janssen Sciences Ireland UC Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dripsey WwTP Storm Tank SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00			0.00E+00
Killeens WwTP Sump Pump SWO	0.00E+00			0.00E+00					
Environment Building WwPS SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00			
Novartis Ringaskiddy Limited 1 Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Novartis Ringaskiddy Limited 2 Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Marinchem Limited Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ballyvolane WwPS SWO	0.00E+00			0.00E+00	1.20E+07	1.19E+07	0.00E+00	0.00E+00	9.59E+01
Bord Gais Energy Ltd Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MONK Coast Road SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
SW67724106 SWO	0.00E+00			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Irish Distillers Limited Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ballick No 3 EO SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-01	1.00E+05	0.00E+00	0.00E+00
CARG Old Water Park SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Gillabbey Pump Station Overflow SWO	0.00E+00	0.00E+00	0.00E+00						

SWO	Base (cfu/s)			Development (cfu/s)			Solution (cfu/s)		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
59 Rosebank 1 SWO								3.08E+07	9.02E+05
Ursuline Convent 1 SWO				3.08E+07	3.04E+07	2.90E+07	3.08E+07	3.04E+07	4.11E+07
Ursuline Convent 2 SWO				3.08E+07	3.05E+07	2.90E+07	3.09E+07	3.04E+07	4.12E+07
Summerhill South 2 SWO				0.00E+00	0.00E+00	0.00E+00		0.00E+00	0.00E+00
Castle Avenue PS SWO		2.78E-02	1.10E-01	2.34E-02	0.00E+00	2.41E-02	0.00E+00	2.39E-02	1.15E-01
30 Silversprings Lane 2 SWO				4.05E+08	4.16E+08	3.71E+08	5.39E+07	5.72E+07	7.89E+07
Summerhill South SWO 1							0.00E+00		
05 Rock Cottages North Mall 1 SWO				3.96E+08	4.10E+08	3.64E+08	3.96E+08	4.09E+08	8.49E+08
48 Gaol Walk 2 SWO				9.42E+04	7.58E+04	8.52E+04	9.37E+04	8.98E+04	1.00E+05
05 Rock Cottages North Mall 2 SWO				3.97E+08	4.11E+08	3.65E+08	3.97E+08	4.10E+08	8.51E+08
61 Douglas Hall Lawn 1 SWO								4.34E+07	1.34E+07
Wilton PS SWO		4.77E+01	1.24E+02	2.18E+01	5.69E+01	6.16E+01	2.25E+01	3.26E+01	3.20E+01
Glanmire PS CSO SWO		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Horgans Quay CSO 2 SWO				0.00E+00	1.67E+09	3.38E+09	2.19E+07	3.68E+07	5.82E+09
Whitegate WwPS SWO		3.78E+08	4.10E+08	8.59E+06	3.78E+08	4.10E+08	4.19E+07	2.45E+07	
Flaxfort Road PS 1 SWO				0.00E+00	3.72E+06	4.48E+06	0.00E+00	5.42E+06	1.78E+07
06 Shandon Street 1 SWO				1.05E+07	9.23E+06	9.36E+06	1.08E+07	9.50E+06	1.12E+07
Summerhill South SWO 3							7.62E+06		
Convent Avenue 1 SWO				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Summerhill South 1 SWO				0.00E+00	0.00E+00	0.00E+00		0.00E+00	0.00E+00
41 Mary Street 2 SWO				1.71E+05	1.41E+05	1.47E+05	1.71E+05	1.45E+05	2.00E+05
Gillabbey Pump Station Overflow 1 SWO				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dripsey WwTP Inlet 1 SWO							3.95E+07	2.91E+07	1.22E+06

SWO	Base (cfu/s)			Development (cfu/s)			Solution (cfu/s)		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
Mahon South PS SWO		2.85E+10	4.87E+10	2.20E+06	3.87E+06	5.25E+06	2.28E+06	3.33E+06	4.87E+06
06 Shandon Street 2 SWO				3.20E+07	2.97E+07	2.86E+07	2.20E+07	2.03E+07	4.18E+07
Lower Aghada WwPS SWO		2.39E+07	1.35E+07	0.00E+00	2.39E+07	1.35E+07			8.79E+07
Convent Avenue 2 SWO				5.35E+05	5.24E+05	4.50E+05	5.32E+05	5.22E+05	8.78E+05
48 Gaol Walk 1 SWO				2.28E+07	2.15E+07	2.06E+07	2.28E+07	2.16E+07	2.75E+07
Horgans Quay CSO 1 SWO				1.95E+03	0.00E+00	0.00E+00	0.00E+00	4.89E+06	8.27E+06
Lower Glanmire Road No.112, N8 SWO				1.05E+06		1.04E+06	7.80E+05	7.86E+05	9.46E+05
Summerhill South 3 SWO				2.29E+05	1.99E+05	1.89E+05		1.80E+05	1.30E+07
61 Douglas Hall Lawn 2 SWO								4.34E+07	1.34E+07
Clover Lawn SWO		3.02E+08	3.48E+08	3.50E+08	3.63E+08	3.38E+08	3.50E+08	3.64E+08	9.12E+08
Flaxfort Road PS 2 SWO				0.00E+00	4.91E+06	4.85E+06	0.00E+00	6.49E+06	1.74E+07
64 Convent Road 2 SWO				2.52E+06	2.50E+06	2.17E+06	8.73E+05	8.49E+05	4.69E+06
Whitegate WwTP SWO							3.98E+07	3.49E+07	6.61E+06
Gillabbey Pump Station Overflow 2 SWO				2.80E+06	2.80E+06	2.45E+06	0.00E+00	0.00E+00	6.08E+06
59 Rosebank 2 SWO								3.34E+07	9.15E+05
41 Mary Street 1 SWO				1.58E+05	1.27E+05	1.35E+05	1.58E+05	1.31E+05	1.75E+05
30 Silversprings Lane 1 SWO				4.03E+08	4.14E+08	3.69E+08	5.19E+07	5.52E+07	7.55E+07
Summerhill South SWO 2							0.00E+00		
51 Skehard Road SWO				2.25E+09	2.26E+09	1.96E+09	2.25E+09	2.24E+09	4.12E+09
64 Convent Road 1 SWO				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Old Comminutor Chamber CSO Ronayne's Court SWO		6.28E+07	5.82E+07	5.12E+07	6.38E+07	6.63E+07	5.00E+07	3.87E+08	5.43E+08
Rostellan SW002 SWO		5.12E+07	3.91E+07	0.00E+00	5.12E+07	3.91E+07	2.23E+07	3.01E+07	3.64E+07
R843 SWO		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

SWO	Base (cfu/s)			Development (cfu/s)			Solution (cfu/s)		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
Dripsey WwTP Inlet 2 SWO							6.29E+07	5.66E+07	1.29E+07

Table A-6 BW Input IE Loads

SWO	Base (cfu/s)			Development (cfu/s)			Solution (cfu/s)		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
Carrigrennan WwTP	4.79E+10	4.79E+10	4.79E+10	4.79E+10	4.79E+10	4.79E+10	4.79E+10	4.79E+10	4.79E+10
Atlantic Pond PS PS01 SWO	3.03E+09	1.24E+09	1.66E+09	3.11E+08	4.27E+08	4.68E+08	1.15E+08	1.32E+07	4.75E+08
Whitegate Aghada WwTP	1.19E+09	1.19E+09	1.19E+09	1.19E+09	1.19E+09	1.19E+09	1.19E+09	1.19E+09	1.19E+09
Shanbally WwTP	7.65E+09	7.65E+09	7.65E+09	7.65E+09	7.65E+09	7.65E+09	7.65E+09	7.65E+09	7.65E+09
Carrigtwohill WwTP	1.92E+09	1.92E+09	1.92E+09	1.92E+09	1.92E+09	1.92E+09	1.92E+09	1.92E+09	1.92E+09
Grand Parade PS PS21 SWO	1.02E+09								
Coal Quay PS PS20 SWO	5.50E+08			1.06E+09	1.08E+09	8.81E+08	2.52E+06	1.79E+06	1.19E+07
River Curagheen Wet	1.21E+09	1.24E+09	1.37E+09	1.21E+09	1.24E+09	1.37E+09	1.21E+09	1.24E+09	1.37E+09
Ballick No 2 SWO	3.68E+08	3.98E+08	4.22E+08	4.15E+08	4.03E+08	4.33E+08	5.06E+06	6.61E+06	1.03E+07
River Owenboy Wet	5.23E+08	5.29E+08	5.75E+08	5.23E+08	5.29E+08	5.75E+08	5.23E+08	5.29E+08	5.75E+08
Summerhill North SWO	2.61E+08	1.79E+07	2.05E+07	2.23E+07	2.29E+07	2.04E+07	9.81E+06	1.02E+07	1.73E+07
10 Gerald Griffin Street SWO	2.40E+08	7.73E+06	8.21E+06	8.49E+06	8.80E+06	7.99E+06	8.37E+06	8.78E+06	1.47E+07
49 Woodbrook Gurrane Lane SWO	1.77E+08	0.00E+00	0.00E+00	6.71E+04	6.53E+04	5.71E+04	6.70E+04	6.68E+04	1.16E+05
13 Wherelands Lane SWO	1.72E+08	4.83E+06	4.95E+06	5.63E+06	5.78E+06	5.61E+06	5.78E+06	5.94E+06	1.24E+07
Horgans Quay CSO SWO	1.57E+08	0.00E+00	0.00E+00	6.69E+07					
River Glashaboy Wet	5.26E+08	5.32E+08	5.80E+08	5.26E+08	5.32E+08	5.80E+08	5.26E+08	5.32E+08	5.80E+08
River Lee Wet Lower	1.12E+09	1.14E+09	1.25E+09	1.12E+09	1.14E+09	1.25E+09	1.12E+09	1.14E+09	1.25E+09
Blarney Storm Tank SWO	1.36E+08	3.79E+08	4.65E+08	2.23E+08	3.79E+08	4.65E+08	0.00E+00	0.00E+00	1.42E+06

SWO	Base (cfu/s)			Development (cfu/s)			Solution (cfu/s)		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
River Dungourney Wet	1.60E+08	1.62E+08	1.76E+08	1.60E+08	1.62E+08	1.76E+08	1.60E+08	1.62E+08	1.76E+08
Salene WwTP	1.80E+08	1.80E+08	1.80E+08	1.80E+08	1.80E+08	1.80E+08	1.80E+08	1.80E+08	1.80E+08
52 Glasheen Bridge SWO	1.13E+08	1.53E+06	1.34E+06	1.26E+06	1.32E+06	1.35E+06	1.26E+06	1.12E+06	1.15E+06
71 Carrigrennan WWTW 3DWF SWO	1.08E+08	1.77E+09	2.74E+09						
Bishop Street SWO	9.44E+07	1.10E+06	1.11E+06	1.18E+06	1.16E+06	1.11E+06	1.18E+06	1.16E+06	1.59E+06
05 Rock Cottages North Mall SWO	8.81E+07	1.45E+07	1.48E+07						
50 Rossa Avenue PS SWO	8.47E+07	1.42E+06	1.39E+06	3.01E+06	3.05E+06	2.82E+06	3.01E+06	3.06E+06	4.59E+06
59 Rosebank SWO	7.41E+07	5.94E+05	4.90E+05	1.46E+06	8.65E+05	9.64E+05	1.46E+06		
Southern Road SWO	7.01E+07	2.37E+07	2.49E+07	2.53E+07	2.71E+07	2.47E+07	1.76E+07	1.90E+07	5.07E+07
North channel C ST	2.91E+08	2.91E+08	2.91E+08	2.91E+08	2.91E+08	2.91E+08	2.91E+08	2.91E+08	2.91E+08
33 Park Avenue SWO	6.52E+07	5.01E+06	5.24E+06	1.12E+07	1.13E+07	1.03E+07	1.13E+07	1.13E+07	2.43E+07
River Owenboy Dry	1.31E+08	1.32E+08	1.44E+08	1.31E+08	1.32E+08	1.44E+08	1.31E+08	1.32E+08	1.44E+08
River Lee Wet Upper	4.80E+08	4.89E+08	5.34E+08	4.80E+08	4.89E+08	5.34E+08	4.80E+08	4.89E+08	5.34E+08
River Owenacurra Wet	4.11E+08	4.16E+08	4.52E+08	4.11E+08	4.16E+08	4.52E+08	4.11E+08	4.16E+08	4.52E+08
River Minane Wet	1.25E+08	1.26E+08	1.37E+08	1.25E+08	1.26E+08	1.37E+08	1.25E+08	1.26E+08	1.37E+08
61 Douglas Hall Lawn SWO	5.82E+07	6.69E+05	6.90E+05	2.13E+07	2.13E+07	1.81E+07	1.67E+06		
River Shournagh Wet Lower	4.30E+08	4.47E+08	4.91E+08	4.30E+08	4.47E+08	4.91E+08	4.30E+08	4.47E+08	4.91E+08
River Curagheen Dry	1.29E+08	1.26E+08	1.25E+08	1.29E+08	1.26E+08	1.25E+08	1.29E+08	1.26E+08	1.25E+08
Maglin WwPS SWO	5.45E+07	6.95E+07	5.99E+07	5.45E+07	5.99E+07	5.99E+07	3.83E+05	2.41E+07	3.30E+06
Ballick No 1 2 SWO	5.30E+07	5.83E+07	5.76E+07	5.81E+07	5.88E+07	5.87E+07	5.23E+07	5.29E+07	5.37E+07
East Passage F ST	1.96E+08	1.96E+08	1.96E+08	1.96E+08	1.96E+08	1.96E+08	1.96E+08	1.96E+08	1.96E+08
East Passage B ST	1.95E+08	1.95E+08	1.95E+08	1.95E+08	1.95E+08	1.95E+08	1.95E+08	1.95E+08	1.95E+08
Ballick No 1 4 SWO	4.55E+07	5.04E+07	4.92E+07	4.98E+07	5.06E+07	5.04E+07	4.38E+07	4.44E+07	4.52E+07

SWO	Base (cfu/s)			Development (cfu/s)			Solution (cfu/s)		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
East Passage G ST	1.89E+08	1.89E+08	1.89E+08	1.89E+08	1.89E+08	1.89E+08	1.89E+08	1.89E+08	1.89E+08
Ballick No 1 5 SWO	4.11E+07	4.56E+07	4.43E+07	4.49E+07	4.58E+07	4.55E+07	3.90E+07	3.96E+07	4.04E+07
48 Gaol Walk SWO	4.09E+07	3.03E+03	3.41E+03						
Cloyne WwTP	9.47E+07	9.47E+07	9.47E+07	9.47E+07	9.47E+07	9.47E+07	9.47E+07	9.47E+07	9.47E+07
South Great Island C ST	1.58E+08	1.58E+08	1.58E+08	1.58E+08	1.58E+08	1.58E+08	1.58E+08	1.58E+08	1.58E+08
Southern Road No 1 SWO	3.72E+07								
06 Shandon Street SWO	3.71E+07	3.37E+05	3.74E+05						
35 Boreenmanna Road (Ashton) SWO	3.69E+07	8.65E+06	8.78E+06	9.13E+06	9.48E+06	8.79E+06	9.14E+06	9.50E+06	1.41E+07
River Bride Lee Wet Lower	2.55E+08	2.63E+08	2.89E+08	2.55E+08	2.63E+08	2.89E+08	2.55E+08	2.63E+08	2.89E+08
South Great Island E ST	1.31E+08	1.31E+08	1.31E+08	1.31E+08	1.31E+08	1.31E+08	1.31E+08	1.31E+08	1.31E+08
Glendale SWO	3.08E+07	6.59E+06	6.26E+06	6.58E+06	6.64E+06	6.10E+06	6.59E+06	6.66E+06	1.15E+07
Summerhill South SWO	3.06E+07	0.00E+00	0.00E+00						
Ballick No 1 1 SWO	3.04E+07	3.42E+07	3.24E+07	3.29E+07	3.42E+07	3.36E+07	2.69E+07	2.75E+07	2.85E+07
02 Eikpa Lodge Sundays Well SWO	3.00E+07	1.27E+06	1.45E+06	1.48E+06	1.68E+06	7.93E+05	1.22E+06	1.06E+06	2.32E+06
East passage J ST	1.21E+08	1.21E+08	1.21E+08	1.21E+08	1.21E+08	1.21E+08	1.21E+08	1.21E+08	1.21E+08
Ballincollig WwTP Storm Tank SWO	2.50E+07	3.07E+07	2.62E+07	2.50E+07	2.62E+07	2.62E+07	1.96E+07	4.42E+07	4.40E+07
River Shournagh Wet Upper	1.84E+08	1.91E+08	2.10E+08	1.84E+08	1.91E+08	2.10E+08	1.84E+08	1.91E+08	2.10E+08
Turner's Cross SWO	2.45E+07	9.92E+06	9.45E+06	1.02E+07	1.06E+07	9.57E+06	5.31E+06	5.33E+06	8.65E+06
River Lee Dry Lower	1.80E+08	1.78E+08	1.76E+08	1.80E+08	1.78E+08	1.76E+08	1.80E+08	1.78E+08	1.76E+08
East Passage D ST	9.08E+07	9.08E+07	9.08E+07	9.08E+07	9.08E+07	9.08E+07	9.08E+07	9.08E+07	9.08E+07
North channel B ST	9.07E+07	9.07E+07	9.07E+07	9.07E+07	9.07E+07	9.07E+07	9.07E+07	9.07E+07	9.07E+07
47 ODonovan Rossa Road SWO	2.06E+07	8.93E+04	2.48E+05	1.99E+06	2.02E+06	1.82E+06	1.98E+06	2.01E+06	3.52E+06
East Passage E ST	7.69E+07	7.69E+07	7.69E+07	7.69E+07	7.69E+07	7.69E+07	7.69E+07	7.69E+07	7.69E+07

SWO	Base (cfu/s)			Development (cfu/s)			Solution (cfu/s)		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
River Dungourney Dry	2.23E+07	2.17E+07	2.15E+07	2.23E+07	2.17E+07	2.15E+07	2.23E+07	2.17E+07	2.15E+07
River Glashaboy Dry	5.66E+07	5.50E+07	5.38E+07	5.66E+07	5.50E+07	5.38E+07	5.66E+07	5.50E+07	5.38E+07
River Minane Dry	3.11E+07	3.15E+07	3.42E+07	3.11E+07	3.15E+07	3.42E+07	3.11E+07	3.15E+07	3.42E+07
COBH Old Town Hall SWO	1.49E+07	1.43E+07	1.33E+07	1.49E+07	1.33E+07	1.33E+07	2.76E+07	3.52E+07	2.50E+07
River Bride Lee Wet Upper	1.09E+08	1.13E+08	1.24E+08	1.09E+08	1.13E+08	1.24E+08	1.09E+08	1.13E+08	1.24E+08
62 Sunview Place East SWO	1.35E+07	1.75E+06	1.71E+06	1.77E+06	1.82E+06	1.70E+06	1.61E+06	1.68E+06	2.71E+06
14 Pophams Road SWO	1.34E+07	4.23E+05	4.33E+05	4.42E+05	4.23E+05	4.31E+05	4.73E+05	4.28E+05	5.12E+05
River Ringabella Wet	2.70E+07	2.74E+07	2.97E+07	2.70E+07	2.74E+07	2.97E+07	2.70E+07	2.74E+07	2.97E+07
37 Victoria Hospital SWO	1.26E+07	3.32E+04	3.95E+04	4.56E+04	3.71E+04	3.54E+04	4.76E+04	4.36E+04	5.21E+04
River Farrannamanagh Wet	7.23E+07	7.31E+07	7.94E+07	7.23E+07	7.31E+07	7.94E+07	7.23E+07	7.31E+07	7.94E+07
Ballinacurra No 1 PS SWO	1.07E+07	1.54E+07	1.37E+07	2.92E+06	2.87E+06	2.92E+06	2.92E+06	3.59E+06	3.04E+06
Carringtowhill WwTP SWO	1.07E+07	2.68E+07		1.03E+07	2.67E+07	2.47E+07	1.43E+07	2.88E+07	3.37E+07
Drurys Ave SWO	1.05E+07	1.12E+07	1.12E+07	1.15E+07	1.14E+07	1.15E+07			
River Lee Dry Upper	7.70E+07	7.61E+07	7.55E+07	7.70E+07	7.61E+07	7.55E+07	7.70E+07	7.61E+07	7.55E+07
75 South Douglas Road SWO	9.28E+06	3.67E+05	5.46E+05	8.95E+05	3.67E+05	5.47E+05	8.95E+05		
River Bride Wet	2.03E+07	2.09E+07	2.29E+07	2.03E+07	2.09E+07	2.29E+07	2.03E+07	2.09E+07	2.29E+07
River Owenacurra Dry	5.75E+07	5.61E+07	5.55E+07	5.75E+07	5.61E+07	5.55E+07	5.75E+07	5.61E+07	5.55E+07
67 St Finbarrs Hospital SWO	8.53E+06	3.14E+06	3.00E+06	3.28E+06	3.34E+06	2.98E+06	3.29E+06	3.34E+06	7.40E+06
Fountainstown 5 ST	3.56E+07	3.56E+07	3.56E+07	3.56E+07	3.56E+07	3.56E+07	3.56E+07	3.56E+07	3.56E+07
Fountainstown caravan park ST	3.51E+07	3.51E+07	3.51E+07	3.51E+07	3.51E+07	3.51E+07	3.51E+07	3.51E+07	3.51E+07
South Great Island D ST	3.31E+07	3.31E+07	3.31E+07	3.31E+07	3.31E+07	3.31E+07	3.31E+07	3.31E+07	3.31E+07
East Passage A ST	3.26E+07	3.26E+07	3.26E+07	3.26E+07	3.26E+07	3.26E+07	3.26E+07	3.26E+07	3.26E+07
South Great Island B ST	3.23E+07	3.23E+07	3.23E+07	3.23E+07	3.23E+07	3.23E+07	3.23E+07	3.23E+07	3.23E+07

SWO	Base (cfu/s)			Development (cfu/s)			Solution (cfu/s)		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
Courtstown PS SWO	7.72E+06	1.66E+06	1.84E+06	1.86E+05	3.60E+05	3.87E+05	1.86E+05	3.59E+05	2.96E+06
Fountainstown 2 ST	3.22E+07	3.22E+07	3.22E+07	3.22E+07	3.22E+07	3.22E+07	3.22E+07	3.22E+07	3.22E+07
North Channel K ST	3.11E+07	3.11E+07	3.11E+07	3.11E+07	3.11E+07	3.11E+07	3.11E+07	3.11E+07	3.11E+07
North Channel G ST	3.06E+07	3.06E+07	3.06E+07	3.06E+07	3.06E+07	3.06E+07	3.06E+07	3.06E+07	3.06E+07
North Channel E ST	3.06E+07	3.06E+07	3.06E+07	3.06E+07	3.06E+07	3.06E+07	3.06E+07	3.06E+07	3.06E+07
Fountainstown 1 ST	3.04E+07	3.04E+07	3.04E+07	3.04E+07	3.04E+07	3.04E+07	3.04E+07	3.04E+07	3.04E+07
Minane WwTP	1.79E+07	1.79E+07	1.79E+07	1.79E+07	1.79E+07	1.79E+07	1.79E+07	1.79E+07	1.79E+07
Killeens WwTP Storm Tank SWO	7.04E+06			9.64E+06					
River Carrigtwohill Wet	2.41E+07	2.34E+07	2.29E+07	2.41E+07	2.34E+07	2.29E+07	2.41E+07	2.34E+07	2.29E+07
03 Hazelhurst Sundays Well SWO	6.86E+06	1.80E+06	1.76E+06	1.90E+06	1.99E+06	1.79E+06	1.95E+06	1.98E+06	3.23E+06
River Shournagh Dry Lower	4.74E+07	4.77E+07	4.79E+07	4.74E+07	4.77E+07	4.79E+07	4.74E+07	4.77E+07	4.79E+07
Kerry Pike WwPS SWO	6.18E+06	6.74E+06	7.34E+06	6.80E+06	6.74E+06	7.34E+06	8.33E+03	2.07E+04	3.85E+05
CARG Carrigaline Park (Att tank) SWO	6.07E+06	4.00E+07	2.48E+08	6.07E+06	2.48E+08	2.48E+08	0.00E+00	1.02E+06	9.24E+06
58 South Ring Road SWO	6.06E+06								
River Knocknamadderee Wet	3.34E+07	3.37E+07	3.66E+07	3.34E+07	3.37E+07	3.66E+07	3.34E+07	3.37E+07	3.66E+07
Priests Hill SWO	4.62E+06	7.76E+04	7.56E+04	7.89E+04	7.74E+04	7.73E+04	6.72E+04	7.76E+04	8.33E+04
54 Flannerys Pub SWO	4.23E+06	8.86E+05	8.79E+05	2.18E+06	2.25E+06	2.02E+06	2.18E+06	2.25E+06	3.55E+06
45 St Finbarr's Place SWO	4.15E+06	1.07E+05	1.10E+05	1.10E+05	1.07E+05	1.10E+05	1.10E+05	1.07E+05	1.38E+05
23 Bridge Street SWO	4.10E+06	5.99E+05	6.16E+05	6.84E+05	6.46E+05	6.20E+05	6.86E+05	6.50E+05	8.32E+05
Riversfield Estate SWO	3.98E+06	4.52E+06		4.50E+06	4.55E+06	5.54E+06			
Owenacurra 1 ST	1.65E+07	1.65E+07	1.65E+07	1.65E+07	1.65E+07	1.65E+07	1.65E+07	1.65E+07	1.65E+07
North Channel N ST	1.55E+07	1.55E+07	1.55E+07	1.55E+07	1.55E+07	1.55E+07	1.55E+07	1.55E+07	1.55E+07
East Passage K ST	1.55E+07	1.55E+07	1.55E+07	1.55E+07	1.55E+07	1.55E+07	1.55E+07	1.55E+07	1.55E+07

SWO	Base (cfu/s)			Development (cfu/s)			Solution (cfu/s)		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
River Bride Lee Dry Lower	2.74E+07	2.66E+07	2.65E+07	2.74E+07	2.66E+07	2.65E+07	2.74E+07	2.66E+07	2.65E+07
North Channel F ST	1.52E+07	1.52E+07	1.52E+07	1.52E+07	1.52E+07	1.52E+07	1.52E+07	1.52E+07	1.52E+07
North Channel D ST	1.52E+07	1.52E+07	1.52E+07	1.52E+07	1.52E+07	1.52E+07	1.52E+07	1.52E+07	1.52E+07
North Channel O ST	1.50E+07	1.50E+07	1.50E+07	1.50E+07	1.50E+07	1.50E+07	1.50E+07	1.50E+07	1.50E+07
North Channel M ST	1.50E+07	1.50E+07	1.50E+07	1.50E+07	1.50E+07	1.50E+07	1.50E+07	1.50E+07	1.50E+07
21 Fever Hospital Steps SWO	3.60E+06	1.37E+02	1.88E+02	4.07E+02	1.86E+02	1.64E+02	3.59E+02	2.30E+02	6.00E+02
Tivoli PS EO SWO	3.58E+06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ursuline Convent SWO	3.54E+06	1.12E+06	1.16E+06						
East passage I ST	1.46E+07	1.46E+07	1.46E+07	1.46E+07	1.46E+07	1.46E+07	1.46E+07	1.46E+07	1.46E+07
Fitzpatricks PS 2 SWO	3.46E+06			3.42E+06	4.31E+06	4.07E+06	2.75E+06	4.26E+06	9.26E+06
River Ringabella Dry	6.76E+06	6.84E+06	7.43E+06	6.76E+06	6.84E+06	7.43E+06	6.76E+06	6.84E+06	7.43E+06
Carrigrohane WwPS SWO	3.03E+06	3.39E+06	2.96E+06	3.03E+06	2.96E+06	2.96E+06	1.31E+06	2.41E+06	2.21E+06
22 Hardwick Street SWO	2.89E+06	7.00E+04	8.43E+04	8.76E+04	7.00E+04	8.43E+04	8.75E+04	6.89E+04	9.93E+04
42 Travers Street SWO	2.72E+06	6.47E+04	6.43E+04	8.23E+04	6.66E+04	7.41E+04	8.04E+04	7.45E+04	9.17E+04
River Shournagh Dry Upper	2.03E+07	2.04E+07	2.05E+07	2.03E+07	2.04E+07	2.05E+07	2.03E+07	2.04E+07	2.05E+07
River Farrannamanagh Dry	1.81E+07	1.83E+07	1.98E+07	1.81E+07	1.83E+07	1.98E+07	1.81E+07	1.83E+07	1.98E+07
44 Keysers Hill SWO	2.28E+06	5.20E+05	5.12E+05	5.47E+05	5.68E+05	5.06E+05	5.46E+05	5.61E+05	7.18E+05
Convent Avenue SWO	2.18E+06	1.45E+04	2.11E+04						
Midleton WwTP	1.42E+08	1.42E+08	1.42E+08	1.42E+08	1.42E+08	1.42E+08	1.42E+08	1.42E+08	1.42E+08
COBH Dockyard SWO	2.01E+06	1.71E+06	2.72E+05	2.01E+06	2.72E+05	2.72E+05	7.33E+06	1.12E+07	5.58E+06
Cloghroe WwPS SWO	1.95E+06	6.97E+06	6.12E+06	6.20E+06	6.97E+06	6.12E+06	5.48E+05	5.16E+05	2.83E+06
41 Mary Street SWO	1.84E+06	4.91E+03	5.40E+03						
River Carrigtwohill Dry	6.02E+06	5.85E+06	5.72E+06	6.02E+06	5.85E+06	5.72E+06	6.02E+06	5.85E+06	5.72E+06

SWO	Base (cfu/s)			Development (cfu/s)			Solution (cfu/s)		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
72 Belgard Downs SWO	1.63E+06	1.52E+07	1.47E+07	1.44E+07	1.46E+07	1.52E+07	1.44E+07	4.04E+07	1.57E+07
River Bride Lee Dry Upper	1.17E+07	1.14E+07	1.14E+07	1.17E+07	1.14E+07	1.14E+07	1.17E+07	1.14E+07	1.14E+07
Powdermill WwPS SWO	1.41E+06	1.50E+06	9.55E+05	1.41E+06	9.55E+05	9.55E+05	2.44E+05	6.66E+05	3.59E+05
Assumption Road SWO	1.41E+06	3.39E+05	3.63E+05	2.66E+05	3.11E+05	3.61E+05	2.66E+05	3.14E+05	4.87E+05
04 Wyse Hill SWO	1.36E+06	9.54E+04	9.62E+04	9.90E+04	9.55E+04	9.65E+04	9.85E+04	9.77E+04	1.44E+05
Ballygarvan WwTP SWO	1.29E+06	2.07E+06	2.71E+06	1.89E+06	2.07E+06	2.71E+06			
River Knocknamaddree Dry	8.34E+06	8.43E+06	9.16E+06	8.34E+06	8.43E+06	9.16E+06	8.34E+06	8.43E+06	9.16E+06
Cathedral Walk SWO	1.22E+06	1.46E+05	1.63E+05	1.97E+05	1.57E+05	1.63E+05	1.97E+05	1.57E+05	1.88E+05
Old Cobh Road WWPS SWO	1.20E+06	2.57E+06		1.36E+06	2.73E+06	9.49E+06	0.00E+00	0.00E+00	0.00E+00
43 Barrack Street SWO	1.14E+06	1.67E+05	1.76E+05	1.89E+05	1.82E+05	1.75E+05	1.89E+05	1.84E+05	2.41E+05
07 John Redmond Street SWO	1.05E+06	5.68E+03	5.95E+03	6.03E+03	5.68E+03	5.95E+03	6.03E+03	5.78E+03	6.05E+03
River Bride Dry	2.17E+06	2.11E+06	2.10E+06	2.17E+06	2.11E+06	2.10E+06	2.17E+06	2.11E+06	2.10E+06
Gothic Bridge WwPS SWO	8.42E+05	1.22E+06	1.16E+06	8.41E+05	1.22E+06	1.16E+06	3.43E+04	5.61E+04	3.37E+05
64 Convent Road SWO	7.63E+05	6.62E+04	1.07E+05						
Great Wm O'Brien Street SWO	6.86E+05								
Popes Road SWO	6.83E+05	1.51E+05	1.34E+05	1.56E+05	1.22E+05	1.34E+05	1.55E+05	1.23E+05	1.66E+05
Old Yoghall Road Oakwood PS Beechwood Court PS SWO	6.80E+05	7.32E+05	4.23E+05	7.18E+05	7.36E+05	6.08E+05	7.26E+05	7.41E+05	4.62E+05
Ballinacurra No 2 PS SWO	6.69E+05	1.36E+06	8.05E+05	6.36E+05	1.35E+06	7.14E+05	7.30E+05	1.24E+06	7.27E+05
18 Thomas Davis Street SWO	6.57E+05	1.25E+05	1.49E+05	1.39E+05	1.30E+05	1.46E+05	1.38E+05	1.29E+05	1.89E+05
Greenhills WwPS SWO	6.45E+05								
Fountainstown 3 ST	2.32E+06	2.32E+06	2.32E+06	2.32E+06	2.32E+06	2.32E+06	2.32E+06	2.32E+06	2.32E+06
Leesdale WwPS SWO	5.16E+05	6.77E+05	2.37E+05	5.16E+05	2.37E+05	2.37E+05	4.26E+05	6.76E+05	2.26E+05
North Cobh WwTP	1.02E+07	1.02E+07	1.02E+07	1.02E+07	1.02E+07	1.02E+07	1.02E+07	1.02E+07	1.02E+07

SWO	Base (cfu/s)			Development (cfu/s)			Solution (cfu/s)		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
North Channel L ST	1.92E+06	1.92E+06	1.92E+06	1.92E+06	1.92E+06	1.92E+06	1.92E+06	1.92E+06	1.92E+06
Fountainstown 4 ST	1.92E+06	1.92E+06	1.92E+06	1.92E+06	1.92E+06	1.92E+06	1.92E+06	1.92E+06	1.92E+06
Dwyers Road PS SWO	4.27E+05	5.98E+05	4.02E+05	4.66E+05	5.88E+05	5.68E+05	5.04E+06	6.33E+06	9.03E+06
Halfway Carpark SWO	4.21E+05	4.48E+05	4.18E+05	4.26E+05	4.48E+05	4.18E+05	4.26E+05		3.71E+03
MONK Monkstown SWO	3.76E+05	4.08E+05	1.91E+05	3.76E+05	1.91E+05	1.91E+05	5.67E+05	1.18E+06	
COBH Station Car Park SWO	3.76E+05	4.03E+05	4.08E+05	3.76E+05	4.08E+05	4.08E+05	1.03E+06	1.46E+06	7.85E+05
RNSY Ringaskiddy Village SWO	3.63E+05	3.10E+05	2.67E+05	3.63E+05	2.67E+05	2.67E+05	1.13E+06	1.20E+06	8.12E+05
Anglesea Road 1 SWO	3.59E+05								
Elm Road SWO	3.37E+05	6.64E+05		3.59E+05	6.91E+05	4.01E+05	3.61E+05	6.93E+05	1.90E+05
North channel A ST	1.29E+06	1.29E+06	1.29E+06	1.29E+06	1.29E+06	1.29E+06	1.29E+06	1.29E+06	1.29E+06
South Great Island G ST	1.20E+06	1.20E+06	1.20E+06	1.20E+06	1.20E+06	1.20E+06	1.20E+06	1.20E+06	1.20E+06
CARG Crosshaven Road SWO	2.61E+05	2.57E+05	5.75E+05	2.61E+05	5.75E+05	5.75E+05	9.79E+05	1.09E+06	7.72E+05
30 Silversprings Lane SWO	2.60E+05	1.40E+07	1.66E+07						
South Great Island A ST	1.07E+06	1.07E+06	1.07E+06	1.07E+06	1.07E+06	1.07E+06	1.07E+06	1.07E+06	1.07E+06
East Passage C ST	1.00E+06	1.00E+06	1.00E+06	1.00E+06	1.00E+06	1.00E+06	1.00E+06	1.00E+06	1.00E+06
High Street SWO	2.31E+05	5.11E+03	2.91E+03	1.99E+03	4.27E+03	1.51E+03	0.00E+00	0.00E+00	0.00E+00
COBH Rushbrooke SWO	2.08E+05	1.04E+05	4.46E+04	2.08E+05	4.46E+04	4.46E+04	1.43E+05	2.36E+05	
Church Hill SWO	1.99E+05	3.03E+05	8.42E+04	1.99E+05	8.42E+04	8.42E+04	1.58E+05	2.83E+05	6.45E+04
North Cobh WwTP SWO	1.98E+05	1.86E+06	2.10E+06	1.98E+05	2.10E+06	2.10E+06	2.27E+05	3.90E+06	2.90E+06
Bessborough WwPS SWO	1.91E+05	2.55E+05	2.83E+05	7.29E+04	2.65E+05	2.83E+05	7.28E+04	2.65E+05	2.80E+05
08 Upper John Street SWO	1.90E+05	7.17E+03	7.61E+03	7.85E+03	7.20E+03	7.61E+03	7.82E+03	7.64E+03	7.98E+03
29 Trafalgar Hill SWO	1.81E+05			9.68E-04	9.60E-04	2.09E-03	0.00E+00	1.71E-03	5.81E-03
Church View 2 SWO	1.54E+05	2.23E+05	7.19E+04	1.54E+05	7.19E+04	7.19E+04	1.22E+05	2.22E+05	6.46E+04

SWO	Base (cfu/s)			Development (cfu/s)			Solution (cfu/s)		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
South Great Island F ST	6.32E+05	6.32E+05	6.32E+05	6.32E+05	6.32E+05	6.32E+05	6.32E+05	6.32E+05	6.32E+05
North Channel P ST	5.67E+05	5.67E+05	5.67E+05	5.67E+05	5.67E+05	5.67E+05	5.67E+05	5.67E+05	5.67E+05
North Channel Q ST	5.02E+05	5.02E+05	5.02E+05	5.02E+05	5.02E+05	5.02E+05	5.02E+05	5.02E+05	5.02E+05
North Channel J ST	5.02E+05	5.02E+05	5.02E+05	5.02E+05	5.02E+05	5.02E+05	5.02E+05	5.02E+05	5.02E+05
East passage H ST	5.02E+05	5.02E+05	5.02E+05	5.02E+05	5.02E+05	5.02E+05	5.02E+05	5.02E+05	5.02E+05
North Channel I ST	5.02E+05	5.02E+05	5.02E+05	5.02E+05	5.02E+05	5.02E+05	5.02E+05	5.02E+05	5.02E+05
Mahon North PSEO SWO	1.14E+05	4.89E-03	6.57E-03	7.70E-03	6.47E-03	6.79E-03	9.03E-03	7.22E-03	1.61E-02
Crosses Green PS No 2 SWO	1.10E+05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Railway Yard WwPS SWO	9.75E+04	3.74E+03	3.84E+03	3.76E+03	3.74E+03	3.85E+03	3.77E+03	3.78E+03	3.87E+03
GLEN Glenbrook SWO	7.23E+04	9.80E+04	0.00E+00	7.23E+04	0.00E+00	0.00E+00	8.78E+04	1.91E+05	1.70E-02
PSWT Passage West SWO	6.08E+04	1.36E+05	0.00E+00	6.08E+04	0.00E+00	0.00E+00	6.01E+04	1.52E+05	0.00E+00
CARG Church Road SWO	5.70E+04	1.02E+05	7.38E+04	5.70E+04	7.38E+04	7.38E+04	0.00E+00	2.32E+03	4.40E+03
Fitzpatricks PS 1 SWO	5.66E+04			2.58E+05	3.16E+05	3.38E+05	1.99E+05	3.14E+05	1.06E+06
Eastgate PS SWO	5.07E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
COBH Dock Cottages SWO	3.53E+04	0.00E+00	4.81E+03	3.53E+04	4.81E+03	4.81E+03	0.00E+00	0.00E+00	0.00E+00
PSWT Cork Road SWO	2.94E+04	6.42E+04	3.76E+05	2.94E+04	3.76E+05	3.76E+05	2.68E+04	6.75E+04	4.16E+05
Anglesea Road 2 SWO	2.64E+04								
City Printers PS SWO	2.37E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Roxboro Housing Estate PS SWO	2.08E+04	3.12E+04	1.20E+04	2.21E+04	3.12E+04	2.33E+04	2.21E+04	3.16E+04	1.18E+04
Glencurrig PS SWO	2.06E+04								
Eastgate WwPS SWO	1.63E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Owenacurra 2 ST	6.54E+04	6.54E+04	6.54E+04	6.54E+04	6.54E+04	6.54E+04	6.54E+04	6.54E+04	6.54E+04
North Channel H ST	6.54E+04	6.54E+04	6.54E+04	6.54E+04	6.54E+04	6.54E+04	6.54E+04	6.54E+04	6.54E+04

SWO	Base (cfu/s)			Development (cfu/s)			Solution (cfu/s)		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
Jn Dunbar ST SWO	1.33E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cloyne Riverside WwPS SWO	1.14E+04	3.05E+04	0.00E+00	1.07E+04	3.05E+04	0.00E+00			
Donscourt PS SWO	8.49E+03	7.54E+03	1.07E+04	1.09E+04	1.06E+04	9.17E+03	1.09E+04	1.07E+04	1.84E+04
24 York Street SWO	7.76E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
The Rock PS SWO	5.06E+03	7.02E+03	2.59E+02	5.53E+03	6.33E+03	5.28E+03	5.38E+03	6.58E+03	4.13E+02
Cois Muileann WwPS SWO	3.26E+03	6.34E+03	1.05E+03	3.39E+03	6.34E+03	1.05E+03	3.40E+03	6.71E+03	
Woodhaven PS EO SWO	3.03E+03	2.50E+03	3.69E+03	3.73E+03	3.50E+03	3.14E+03	3.73E+03	0.00E+00	0.00E+00
Crosses Green PS SWO	3.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lower Glanmire Road No 112 N8 SWO	1.97E+03	4.14E+04	4.30E+04						
Oakwood PS SWO	1.04E+03	9.02E+02	8.62E+02	1.00E+03	1.02E+03	1.25E+03	1.28E+03	1.10E+03	9.28E+02
Riverview Estate 1 (Dual MH) SWO	5.54E+02	4.57E+02	6.83E+02	6.83E+02	6.86E+02	5.67E+02	6.83E+02	6.72E+02	1.02E+03
Church View 1 SWO	3.75E+02	4.33E+02	3.19E+02	3.75E+02	3.19E+02	3.19E+02	3.32E+02	2.89E+02	1.86E+02
Dept of Defence LOGS HQ Naval Base Haulbowline WwTP 1 Emission Point 1 Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Roxboro Mews PS SWO	2.44E+02	2.41E+02	2.44E+02	2.75E+02	2.67E+02	2.63E+02	3.19E+02	2.91E+02	2.45E+02
Trabolgan Holiday Centre Trabolgan Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lower Glanmire Road SWO	5.79E+01	6.44E+01	6.58E+01		8.08E+01	5.85E+01	7.73E+01	7.84E+01	1.16E+02
Dept of Defence LOGS HQ Naval Base Haulbowline WwTP 5 Emission Point 2 Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
27 Grattan Hill SWO	2.04E+00	2.84E+04	3.25E+04	3.00E+04	2.81E+04	3.22E+04	1.64E+04	1.57E+04	2.00E+04
Wallingstown PS SWO	1.46E+00	1.83E+00	4.48E+00	1.35E+00	1.94E+00	2.21E+00	1.31E+00	9.40E-01	2.08E+00
28 Beales Hill SWO	7.16E-03	1.66E+04	1.66E+04	1.66E+04	1.66E+04	1.66E+04	1.66E+04	1.68E+04	1.68E+04
Barryscourt WWPS EO SWO	0.00E+00	0.00E+00		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Stratton Pines PS SWO	0.00E+00	5.06E+03	5.38E+03	5.74E+03	5.94E+03	5.19E+03	5.16E+03	5.28E+03	5.82E+03
BioMarin International Ltd Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

SWO	Base (cfu/s)			Development (cfu/s)			Solution (cfu/s)		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
Cow's Cross WwPS SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Spike Island Development Ltd Spike Island Cork Harbour Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RNSY Coolmore Cross SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Electricity Supply Board Aghada 1 Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Curraheen PS 1 SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Electricity Supply Board Aghada 4 Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
East Cork Oil Broomfield West Midleton (WP (W) 02/87) Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
XHAV Carpark PS 1 SWO	0.00E+00	0.00E+00	4.00E+05	0.00E+00	4.00E+05	4.00E+05	0.00E+00	0.00E+00	0.00E+00
The Island Crematorium Ltd Mocklerstown House Clerihan Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hovione Limited Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Little Island Interchange PS SWO	0.00E+00	4.32E+04	1.05E+05	3.67E+04	4.53E+04	1.13E+05	5.74E+04	5.36E+04	9.20E+05
CARG Dunnes network overflow SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
IDA No1 WWPS ESO SWO	0.00E+00	0.00E+00		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Thermo Fisher Scientific Cork Limited Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sundays Well PS SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Recordati Ireland Limited Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kingsley PS SWO	0.00E+00	1.10E+05	1.14E+05	1.14E+05	1.10E+05	1.14E+05	1.14E+05	1.13E+05	1.28E+05
Riverview Estate (SW68737602) (Dual MH) SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Halting Site Carrigrohane PS EO SWO	0.00E+00			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bellevue PSEO SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cois Fota Owners Management Co Ltd Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Curraheen (Dog Track) PS SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Flaxfort Road PS SWO	0.00E+00	3.12E+06	4.05E+06						

SWO	Base (cfu/s)			Development (cfu/s)			Solution (cfu/s)		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
Cloyne Dun Orga SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00			
Irving Oil Whitegate Refinery Limited Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lynch's Quay WwPS SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dripsey WwTP Inlet SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00			0.00E+00
XHAV The Glen PS SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.52E+04	5.05E+06	4.51E+06
Curraheen PS 2 SWO	0.00E+00			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pfizer Ireland Pharmaceuticals Ringaskiddy Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Watergrasshill WwTP SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
Grenagh WwTP Storm Tank SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
Minane Bridge SW01 SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00			
Roadstone Ltd Carrigtwohill Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dairygold TINE Ltd Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Church Lane SWO	0.00E+00	0.00E+00		0.00E+00	3.25E-04	0.00E+00	0.00E+00	3.10E-04	0.00E+00
Cork Ring Bandon Road WwPS SWO	0.00E+00								
Janssen Sciences Ireland UC Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dripsey WwTP Storm Tank SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00			0.00E+00
Killeens WwTP Sump Pump SWO	0.00E+00			0.00E+00					
Environment Building WwPS SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00			
Novartis Ringaskiddy Limited 1 Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Novartis Ringaskiddy Limited 2 Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Marinochem Limited Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ballyvolane WwPS SWO	0.00E+00			0.00E+00	4.79E+05	4.74E+05	0.00E+00	0.00E+00	3.84E+00
Bord Gais Energy Ltd Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

SWO	Base (cfu/s)			Development (cfu/s)			Solution (cfu/s)		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
MONK Coast Road SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
SW67724106 SWO	0.00E+00			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Irish Distillers Limited Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ballick No 3 EO SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.17E-03	4.00E+03	0.00E+00	0.00E+00
CARG Old Water Park SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Gillabbey Pump Station Overflow SWO	0.00E+00	0.00E+00	0.00E+00						
59 Rosebank 1 SWO								1.23E+06	3.61E+04
Ursuline Convent 1 SWO				1.23E+06	1.22E+06	1.16E+06	1.23E+06	1.21E+06	1.65E+06
Ursuline Convent 2 SWO				1.23E+06	1.22E+06	1.16E+06	1.23E+06	1.22E+06	1.65E+06
Summerhill South 2 SWO				0.00E+00	0.00E+00	0.00E+00		0.00E+00	0.00E+00
Castle Avenue PS SWO		1.11E-03	4.42E-03	9.35E-04	0.00E+00	9.66E-04	0.00E+00	9.54E-04	4.58E-03
30 Silversprings Lane 2 SWO				1.62E+07	1.66E+07	1.48E+07	2.15E+06	2.29E+06	3.16E+06
Summerhill South SWO 1							0.00E+00		
05 Rock Cottages North Mall 1 SWO				1.58E+07	1.64E+07	1.46E+07	1.58E+07	1.63E+07	3.40E+07
48 Gaol Walk 2 SWO				3.77E+03	3.03E+03	3.41E+03	3.75E+03	3.59E+03	4.00E+03
05 Rock Cottages North Mall 2 SWO				1.59E+07	1.64E+07	1.46E+07	1.59E+07	1.64E+07	3.40E+07
61 Douglas Hall Lawn 1 SWO								1.73E+06	5.37E+05
Wilton PS SWO		1.91E+00	4.98E+00	8.73E-01	2.28E+00	2.46E+00	8.99E-01	1.30E+00	1.28E+00
Glanmire PS CSO SWO		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Horgans Quay CSO 2 SWO				0.00E+00	6.69E+07	1.35E+08	8.78E+05	1.47E+06	2.33E+08
Whitegate WwPS SWO		1.51E+07	1.64E+07	3.44E+05	1.51E+07	1.64E+07	1.68E+06	9.82E+05	
Flaxfort Road PS 1 SWO				0.00E+00	1.49E+05	1.79E+05	0.00E+00	2.17E+05	7.13E+05
06 Shandon Street 1 SWO				4.22E+05	3.69E+05	3.75E+05	4.31E+05	3.80E+05	4.50E+05

SWO	Base (cfu/s)			Development (cfu/s)			Solution (cfu/s)		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
Summerhill South SWO 3							3.05E+05		
Convent Avenue 1 SWO				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Summerhill South 1 SWO				0.00E+00	0.00E+00	0.00E+00		0.00E+00	0.00E+00
41 Mary Street 2 SWO				6.85E+03	5.63E+03	5.87E+03	6.85E+03	5.79E+03	7.98E+03
Gillabbey Pump Station Overflow 1 SWO				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dripsey WwTP Inlet 1 SWO							1.58E+06	1.16E+06	4.89E+04
Mahon South PS SWO		1.14E+09	1.95E+09	8.79E+04	1.55E+05	2.10E+05	9.12E+04	1.33E+05	1.95E+05
06 Shandon Street 2 SWO				1.28E+06	1.19E+06	1.14E+06	8.81E+05	8.12E+05	1.67E+06
Lower Aghada WwPS SWO		9.55E+05	5.39E+05	0.00E+00	9.55E+05	5.39E+05			3.52E+06
Convent Avenue 2 SWO				2.14E+04	2.10E+04	1.80E+04	2.13E+04	2.09E+04	3.51E+04
48 Gaol Walk 1 SWO				9.13E+05	8.58E+05	8.25E+05	9.11E+05	8.65E+05	1.10E+06
Horgans Quay CSO 1 SWO				7.79E+01	0.00E+00	0.00E+00	0.00E+00	1.96E+05	3.31E+05
Lower Glanmire Road No.112, N8 SWO				4.19E+04		4.17E+04	3.12E+04	3.14E+04	3.78E+04
Summerhill South 3 SWO				9.14E+03	7.95E+03	7.58E+03		7.21E+03	5.20E+05
61 Douglas Hall Lawn 2 SWO								1.74E+06	5.37E+05
Clover Lawn SWO		1.21E+07	1.39E+07	1.40E+07	1.45E+07	1.35E+07	1.40E+07	1.46E+07	3.65E+07
Flaxfort Road PS 2 SWO				0.00E+00	1.97E+05	1.94E+05	0.00E+00	2.59E+05	6.97E+05
64 Convent Road 2 SWO				1.01E+05	1.00E+05	8.70E+04	3.49E+04	3.40E+04	1.87E+05
Whitegate WwTP SWO							1.59E+06	1.40E+06	2.64E+05
Gillabbey Pump Station Overflow 2 SWO				1.12E+05	1.12E+05	9.80E+04	0.00E+00	0.00E+00	2.43E+05
59 Rosebank 2 SWO								1.33E+06	3.66E+04
41 Mary Street 1 SWO				6.31E+03	5.08E+03	5.40E+03	6.31E+03	5.24E+03	6.99E+03
30 Silversprings Lane 1 SWO				1.61E+07	1.66E+07	1.48E+07	2.08E+06	2.21E+06	3.02E+06

SWO	Base (cfu/s)			Development (cfu/s)			Solution (cfu/s)		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
Summerhill South SWO 2							0.00E+00		
51 Skehard Road SWO				9.01E+07	9.04E+07	7.84E+07	9.01E+07	8.98E+07	1.65E+08
64 Convent Road 1 SWO				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Old Comminutor Chamber CSO Ronayne's Court SWO		2.51E+06	2.33E+06	2.05E+06	2.55E+06	2.65E+06	2.00E+06	1.55E+07	2.17E+07
Rostellan SW002 SWO		2.05E+06	1.56E+06	0.00E+00	2.05E+06	1.56E+06	8.92E+05	1.20E+06	1.46E+06
R843 SWO		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dripsey WwTP Inlet 2 SWO							2.52E+06	2.26E+06	5.14E+05

Table A-7 SFW Input Loads

SWO	Base			Development			Solution		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
Carrigrennan WwTP	1.35E+12	1.35E+12	1.35E+12	1.35E+12	1.35E+12	1.35E+12	1.35E+12	1.35E+12	1.35E+12
Atlantic Pond PS PS01 SWO	3.53E+11	1.34E+11	2.30E+11	5.04E+10	7.31E+10	7.76E+10	2.08E+10	8.52E+09	2.71E+10
Whitegate Aghada WwTP	2.36E+11	2.36E+11	2.36E+11	2.36E+11	2.36E+11	2.36E+11	2.36E+11	2.36E+11	2.36E+11
Shanbally WwTP	1.79E+11	1.79E+11	1.79E+11	1.79E+11	1.79E+11	1.79E+11	1.79E+11	1.79E+11	1.79E+11
Blarney Storm Tank SWO	1.48E+11	2.98E+11	3.69E+11	2.10E+11	2.98E+11	3.69E+11	1.66E+09	6.56E+08	1.16E+09
Carrigtwohill WwTP	1.39E+11	1.39E+11	1.39E+11	1.39E+11	1.39E+11	1.39E+11	1.39E+11	1.39E+11	1.39E+11
River Curagheen Wet	1.28E+11	1.33E+11	1.45E+11	1.28E+11	1.33E+11	1.45E+11	1.28E+11	1.33E+11	1.45E+11
Grand Parade PS PS21 SWO	7.04E+10								
River Owenboy Wet	5.33E+10	5.56E+10	6.05E+10	5.33E+10	5.56E+10	6.05E+10	5.33E+10	5.56E+10	6.05E+10
71 Carrigrennan WWTW 3DWF SWO	4.24E+10	1.78E+11	3.06E+11						
Coal Quay PS PS20 SWO	3.69E+10			7.10E+10	7.14E+10	5.92E+10	9.68E+07	8.39E+07	9.19E+08
River Lee Wet Lower	3.39E+10	3.53E+10	3.82E+10	3.39E+10	3.53E+10	3.82E+10	3.39E+10	3.53E+10	3.82E+10

SWO	Base			Development			Solution		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
River Glashaboy Wet	3.26E+10	3.40E+10	3.70E+10	3.26E+10	3.40E+10	3.70E+10	3.26E+10	3.40E+10	3.70E+10
Ballick No 2 SWO	3.00E+10	3.24E+10	3.59E+10	3.34E+10	3.19E+10	3.57E+10	4.59E+08	6.61E+08	8.63E+08
Summerhill North SWO	2.59E+10	9.59E+08	1.77E+09	1.21E+09	1.40E+09	1.41E+09	4.31E+08	4.91E+08	9.62E+08
River Dungourney Wet	2.52E+10	2.63E+10	2.86E+10	2.52E+10	2.63E+10	2.86E+10	2.52E+10	2.63E+10	2.86E+10
10 Gerald Griffin Street SWO	2.30E+10	3.01E+08	5.73E+08	3.74E+08	4.39E+08	5.24E+08	3.64E+08	4.29E+08	8.90E+08
13 Wherelands Lane SWO	1.97E+10	3.04E+08	6.20E+08	3.78E+08	4.63E+08	5.88E+08	3.77E+08	4.71E+08	8.46E+08
49 Woodbrook Gurrane Lane SWO	1.60E+10	0.00E+00	0.00E+00	5.24E+06	5.19E+06	4.84E+06	5.09E+06	5.12E+06	1.79E+07
Horgans Quay CSO SWO	1.49E+10	0.00E+00	0.00E+00	4.13E+09					
River Lee Wet Upper	1.45E+10	1.51E+10	1.64E+10	1.45E+10	1.51E+10	1.64E+10	1.45E+10	1.51E+10	1.64E+10
River Shournagh Wet Lower	1.38E+10	1.45E+10	1.58E+10	1.38E+10	1.45E+10	1.58E+10	1.38E+10	1.45E+10	1.58E+10
River Owenboy Dry	1.33E+10	1.39E+10	1.51E+10	1.33E+10	1.39E+10	1.51E+10	1.33E+10	1.39E+10	1.51E+10
River Owenacurra Wet	1.25E+10	1.30E+10	1.41E+10	1.25E+10	1.30E+10	1.41E+10	1.25E+10	1.30E+10	1.41E+10
River Minane Wet	1.24E+10	1.29E+10	1.40E+10	1.24E+10	1.29E+10	1.40E+10	1.24E+10	1.29E+10	1.40E+10
Salene WwTP	1.22E+10	1.22E+10	1.22E+10	1.22E+10	1.22E+10	1.22E+10	1.22E+10	1.22E+10	1.22E+10
52 Glasheen Bridge SWO	1.16E+10	3.81E+07	4.42E+07	3.15E+07	3.30E+07	4.42E+07	3.14E+07	2.81E+07	7.49E+07
Maglin WwPS SWO	8.92E+09	1.15E+10	1.31E+10	8.92E+09	1.31E+10	1.31E+10	3.73E+07	3.21E+09	4.22E+08
River Bride Lee Wet Lower	8.21E+09	8.58E+09	9.33E+09	8.21E+09	8.58E+09	9.33E+09	8.21E+09	8.58E+09	9.33E+09
50 Rossa Avenue PS SWO	8.18E+09	4.78E+07	8.75E+07	1.17E+08	1.25E+08	1.73E+08	1.17E+08	1.24E+08	2.86E+08
Bishop Street SWO	8.06E+09	3.21E+07	5.69E+07	3.85E+07	3.90E+07	5.66E+07	3.85E+07	3.87E+07	9.34E+07
05 Rock Cottages North Mall SWO	7.34E+09	6.18E+08	1.15E+09						
Southern Road SWO	6.44E+09	1.39E+09	2.91E+09	2.07E+09	2.42E+09	2.47E+09	1.22E+09	1.51E+09	3.32E+09
59 Rosebank SWO	6.03E+09	1.49E+07	1.38E+07	3.66E+07	2.16E+07	2.73E+07	3.66E+07		
River Shournagh Wet Upper	5.92E+09	6.21E+09	6.75E+09	5.92E+09	6.21E+09	6.75E+09	5.92E+09	6.21E+09	6.75E+09

SWO	Base			Development			Solution		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
Watergrasshill WwTP SWO	5.91E+09	5.89E+09	7.71E+09	7.96E+09	5.89E+09	7.71E+09	2.42E+08		
33 Park Avenue SWO	5.53E+09	2.26E+08	4.42E+08	5.96E+08	7.17E+08	7.77E+08	5.90E+08	7.02E+08	1.51E+09
Kerry Pike WwPS SWO	5.29E+09	5.71E+09	7.02E+09	5.83E+09	5.71E+09	7.02E+09	9.47E+07	1.57E+08	3.96E+08
Cloyne WwTP	4.39E+09	4.39E+09	4.39E+09	4.39E+09	4.39E+09	4.39E+09	4.39E+09	4.39E+09	4.39E+09
61 Douglas Hall Lawn SWO	4.34E+09	1.84E+07	3.07E+07	1.33E+09	1.33E+09	1.14E+09	5.55E+07		
North channel C ST	4.15E+09	4.15E+09	4.15E+09	4.15E+09	4.15E+09	4.15E+09	4.15E+09	4.15E+09	4.15E+09
Southern Road No 1 SWO	4.08E+09								
Ballick No 1 2 SWO	3.58E+09	3.92E+09	4.12E+09	3.91E+09	3.87E+09	4.11E+09	3.18E+09	3.28E+09	3.31E+09
River Bride Lee Wet Upper	3.52E+09	3.68E+09	4.00E+09	3.52E+09	3.68E+09	4.00E+09	3.52E+09	3.68E+09	4.00E+09
Ballick No 1 4 SWO	3.11E+09	3.42E+09	3.60E+09	3.39E+09	3.37E+09	3.60E+09	2.65E+09	2.75E+09	2.79E+09
River Minane Dry	3.10E+09	3.23E+09	3.51E+09	3.10E+09	3.23E+09	3.51E+09	3.10E+09	3.23E+09	3.51E+09
06 Shandon Street SWO	3.01E+09	9.30E+06	1.51E+07						
48 Gaol Walk SWO	2.97E+09	7.58E+04	8.52E+04						
Ballincollig WwTP Storm Tank SWO	2.95E+09	3.49E+09	4.20E+09	2.95E+09	4.20E+09	4.20E+09	2.68E+09	5.24E+09	6.01E+09
Ballick No 1 5 SWO	2.83E+09	3.12E+09	3.28E+09	3.08E+09	3.07E+09	3.28E+09	2.35E+09	2.45E+09	2.49E+09
East Passage F ST	2.81E+09	2.81E+09	2.81E+09	2.81E+09	2.81E+09	2.81E+09	2.81E+09	2.81E+09	2.81E+09
East Passage B ST	2.79E+09	2.79E+09	2.79E+09	2.79E+09	2.79E+09	2.79E+09	2.79E+09	2.79E+09	2.79E+09
East Passage G ST	2.69E+09	2.69E+09	2.69E+09	2.69E+09	2.69E+09	2.69E+09	2.69E+09	2.69E+09	2.69E+09
River Ringabella Wet	2.69E+09	2.81E+09	3.05E+09	2.69E+09	2.81E+09	3.05E+09	2.69E+09	2.81E+09	3.05E+09
02 Eikpa Lodge Sundays Well SWO	2.68E+09	5.42E+07	1.06E+08	9.39E+07	7.24E+07	9.22E+07	7.35E+07	6.59E+07	1.71E+08
Summerhill South SWO	2.49E+09	0.00E+00	0.00E+00						
South Great Island C ST	2.25E+09	2.25E+09	2.25E+09	2.25E+09	2.25E+09	2.25E+09	2.25E+09	2.25E+09	2.25E+09
Glendale SWO	2.20E+09	2.32E+08	4.47E+08	2.68E+08	2.98E+08	3.92E+08	2.68E+08	2.97E+08	7.12E+08

SWO	Base			Development			Solution		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
River Farrannamanagh Wet	2.19E+09	2.29E+09	2.48E+09	2.19E+09	2.29E+09	2.48E+09	2.19E+09	2.29E+09	2.48E+09
Ballick No 1 1 SWO	2.19E+09	2.44E+09	2.57E+09	2.36E+09	2.38E+09	2.58E+09	1.61E+09	1.71E+09	1.76E+09
35 Boreenmanna Road (Ashton) SWO	2.10E+09	2.62E+08	4.32E+08	3.34E+08	3.62E+08	4.25E+08	3.34E+08	3.61E+08	6.96E+08
River Bride Wet	2.09E+09	2.19E+09	2.38E+09	2.09E+09	2.19E+09	2.38E+09	2.09E+09	2.19E+09	2.38E+09
South Great Island E ST	1.87E+09	1.87E+09	1.87E+09	1.87E+09	1.87E+09	1.87E+09	1.87E+09	1.87E+09	1.87E+09
47 ODonovan Rossa Road SWO	1.74E+09	2.23E+06	7.26E+06	8.99E+07	1.04E+08	1.19E+08	8.94E+07	1.01E+08	2.09E+08
East passage J ST	1.73E+09	1.73E+09	1.73E+09	1.73E+09	1.73E+09	1.73E+09	1.73E+09	1.73E+09	1.73E+09
River Curagheen Dry	1.64E+09	1.63E+09	1.61E+09	1.64E+09	1.63E+09	1.61E+09	1.64E+09	1.63E+09	1.61E+09
Turner's Cross SWO	1.51E+09	3.64E+08	6.76E+08	4.42E+08	5.09E+08	6.22E+08	2.16E+08	2.38E+08	5.65E+08
East Passage D ST	1.30E+09	1.30E+09	1.30E+09	1.30E+09	1.30E+09	1.30E+09	1.30E+09	1.30E+09	1.30E+09
North channel B ST	1.30E+09	1.30E+09	1.30E+09	1.30E+09	1.30E+09	1.30E+09	1.30E+09	1.30E+09	1.30E+09
Ballygarvan WwTP SWO	1.13E+09	1.81E+09	2.56E+09	1.70E+09	1.81E+09	2.56E+09			
East Passage E ST	1.10E+09	1.10E+09	1.10E+09	1.10E+09	1.10E+09	1.10E+09	1.10E+09	1.10E+09	1.10E+09
37 Victoria Hospital SWO	1.08E+09	9.58E+05	1.54E+06	1.35E+06	1.14E+06	1.40E+06	1.39E+06	1.29E+06	3.39E+06
62 Sunview Place East SWO	1.04E+09	5.42E+07	9.07E+07	6.38E+07	6.94E+07	8.48E+07	5.67E+07	6.24E+07	1.38E+08
River Knocknamadderee Wet	1.01E+09	1.05E+09	1.15E+09	1.01E+09	1.05E+09	1.15E+09	1.01E+09	1.05E+09	1.15E+09
14 Pophams Road SWO	9.06E+08	1.06E+07	1.55E+07	1.11E+07	1.06E+07	1.54E+07	1.18E+07	1.07E+07	3.85E+07
75 South Douglas Road SWO	7.91E+08	9.19E+06	1.86E+07	2.33E+07	9.17E+06	1.86E+07	2.33E+07		
Drurys Ave SWO	7.71E+08	8.46E+08	9.50E+08	8.53E+08	8.50E+08	9.39E+08			
Killeens WwTP Storm Tank SWO	6.96E+08			9.49E+08					
River Lee Dry Lower	6.85E+08	6.83E+08	6.82E+08	6.85E+08	6.83E+08	6.82E+08	6.85E+08	6.83E+08	6.82E+08
River Ringabella Dry	6.73E+08	7.01E+08	7.63E+08	6.73E+08	7.01E+08	7.63E+08	6.73E+08	7.01E+08	7.63E+08
CARG Carrigaline Park (Att tank) SWO	6.39E+08	4.01E+09	1.90E+10	6.39E+08	1.90E+10	1.90E+10	0.00E+00	5.75E+07	4.31E+08

SWO	Base			Development			Solution		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
COBH Old Town Hall SWO	6.20E+08	5.60E+08	1.16E+09	6.20E+08	1.16E+09	1.16E+09	1.19E+09	1.39E+09	1.83E+09
Gothic Bridge WwPS SWO	6.15E+08	9.23E+08	1.17E+09	6.15E+08	9.23E+08	1.17E+09	5.29E+07	1.30E+08	2.91E+08
Courtstown PS SWO	6.06E+08	1.17E+08	3.16E+08	6.30E+06	4.32E+07	6.49E+07	6.31E+06	4.32E+07	1.73E+08
Minane WwTP	5.91E+08	5.91E+08	5.91E+08	5.91E+08	5.91E+08	5.91E+08	5.91E+08	5.91E+08	5.91E+08
67 St Finbarrs Hospital SWO	5.57E+08	1.19E+08	2.49E+08	1.54E+08	1.86E+08	2.14E+08	1.54E+08	1.85E+08	4.38E+08
River Farrannamanagh Dry	5.48E+08	5.71E+08	6.21E+08	5.48E+08	5.71E+08	6.21E+08	5.48E+08	5.71E+08	6.21E+08
Fountainstown 5 ST	5.08E+08	5.08E+08	5.08E+08	5.08E+08	5.08E+08	5.08E+08	5.08E+08	5.08E+08	5.08E+08
Ballinacurra No 1 PS SWO	5.08E+08	8.00E+08	9.32E+08	1.79E+08	1.73E+08	1.79E+08	1.79E+08	1.96E+08	2.08E+08
Fountainstown caravan park ST	5.02E+08	5.02E+08	5.02E+08	5.02E+08	5.02E+08	5.02E+08	5.02E+08	5.02E+08	5.02E+08
River Dungourney Dry	4.89E+08	4.81E+08	4.77E+08	4.89E+08	4.81E+08	4.77E+08	4.89E+08	4.81E+08	4.77E+08
Grenagh WwTP Storm Tank SWO	4.83E+08	8.44E+08	1.29E+09	7.47E+08	8.44E+08	1.29E+09	1.64E+08		
River Glashaboy Dry	4.77E+08	4.67E+08	4.59E+08	4.77E+08	4.67E+08	4.59E+08	4.77E+08	4.67E+08	4.59E+08
South Great Island D ST	4.73E+08	4.73E+08	4.73E+08	4.73E+08	4.73E+08	4.73E+08	4.73E+08	4.73E+08	4.73E+08
03 Hazelhurst Sundays Well SWO	4.68E+08	6.43E+07	1.16E+08	7.82E+07	8.77E+07	1.10E+08	7.89E+07	8.71E+07	1.94E+08
East Passage A ST	4.65E+08	4.65E+08	4.65E+08	4.65E+08	4.65E+08	4.65E+08	4.65E+08	4.65E+08	4.65E+08
South Great Island B ST	4.62E+08	4.62E+08	4.62E+08	4.62E+08	4.62E+08	4.62E+08	4.62E+08	4.62E+08	4.62E+08
Fountainstown 2 ST	4.60E+08	4.60E+08	4.60E+08	4.60E+08	4.60E+08	4.60E+08	4.60E+08	4.60E+08	4.60E+08
North Channel K ST	4.45E+08	4.45E+08	4.45E+08	4.45E+08	4.45E+08	4.45E+08	4.45E+08	4.45E+08	4.45E+08
Priests Hill SWO	4.39E+08	2.03E+06	2.46E+06	2.11E+06	2.10E+06	2.42E+06	1.80E+06	2.09E+06	3.57E+06
North Channel G ST	4.37E+08	4.37E+08	4.37E+08	4.37E+08	4.37E+08	4.37E+08	4.37E+08	4.37E+08	4.37E+08
North Channel E ST	4.37E+08	4.37E+08	4.37E+08	4.37E+08	4.37E+08	4.37E+08	4.37E+08	4.37E+08	4.37E+08
Fountainstown 1 ST	4.35E+08	4.35E+08	4.35E+08	4.35E+08	4.35E+08	4.35E+08	4.35E+08	4.35E+08	4.35E+08
Carrigrohane WwPS SWO	3.90E+08	4.33E+08	5.21E+08	3.90E+08	5.21E+08	5.21E+08	1.90E+08	2.62E+08	3.04E+08

SWO	Base			Development			Solution		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
Carringtonhill WwTP SWO	3.64E+08	1.44E+09		3.75E+08	1.44E+09	2.06E+09	4.95E+08	1.48E+09	2.40E+09
72 Belgard Downs SWO	3.60E+08	5.61E+08	1.17E+09	5.91E+08	7.39E+08	1.13E+09	5.91E+08	1.57E+09	1.73E+09
Dripsey WwTP Storm Tank SWO	3.21E+08	3.95E+08	5.36E+08	3.77E+08	3.95E+08	5.36E+08			1.72E+08
Riversfield Estate SWO	3.18E+08	3.54E+08		3.54E+08	3.47E+08	4.54E+08			
58 South Ring Road SWO	3.15E+08								
River Lee Dry Upper	2.94E+08	2.93E+08	2.92E+08	2.94E+08	2.93E+08	2.92E+08	2.94E+08	2.93E+08	2.92E+08
Fitzpatricks PS 2 SWO	2.92E+08			2.68E+08	3.79E+08	4.00E+08	2.07E+08	3.68E+08	6.69E+08
54 Flannerys Pub SWO	2.87E+08	3.17E+07	5.99E+07	8.89E+07	9.96E+07	1.25E+08	8.86E+07	9.83E+07	2.11E+08
Midleton WwTP	2.77E+08	2.77E+08	2.77E+08	2.77E+08	2.77E+08	2.77E+08	2.77E+08	2.77E+08	2.77E+08
Halfway Carpark SWO	2.56E+08	2.67E+08	3.49E+08	2.60E+08	2.67E+08	3.49E+08	2.60E+08		7.63E+06
River Knocknamaddere Dry	2.53E+08	2.64E+08	2.87E+08	2.53E+08	2.64E+08	2.87E+08	2.53E+08	2.64E+08	2.87E+08
River Owenacurra Dry	2.43E+08	2.39E+08	2.36E+08	2.43E+08	2.39E+08	2.36E+08	2.43E+08	2.39E+08	2.36E+08
45 St Finbarr's Place SWO	2.38E+08	2.71E+06	3.89E+06	2.82E+06	2.74E+06	3.87E+06	2.82E+06	2.73E+06	7.34E+06
Owenacurra 1 ST	2.36E+08	2.36E+08	2.36E+08	2.36E+08	2.36E+08	2.36E+08	2.36E+08	2.36E+08	2.36E+08
North Channel N ST	2.22E+08	2.22E+08	2.22E+08	2.22E+08	2.22E+08	2.22E+08	2.22E+08	2.22E+08	2.22E+08
East Passage K ST	2.22E+08	2.22E+08	2.22E+08	2.22E+08	2.22E+08	2.22E+08	2.22E+08	2.22E+08	2.22E+08
42 Travers Street SWO	2.21E+08	1.99E+06	2.74E+06	2.53E+06	2.17E+06	3.05E+06	2.14E+06	2.04E+06	5.61E+06
North Channel F ST	2.18E+08	2.18E+08	2.18E+08	2.18E+08	2.18E+08	2.18E+08	2.18E+08	2.18E+08	2.18E+08
North Channel D ST	2.18E+08	2.18E+08	2.18E+08	2.18E+08	2.18E+08	2.18E+08	2.18E+08	2.18E+08	2.18E+08
North Channel O ST	2.15E+08	2.15E+08	2.15E+08	2.15E+08	2.15E+08	2.15E+08	2.15E+08	2.15E+08	2.15E+08
North Channel M ST	2.15E+08	2.15E+08	2.15E+08	2.15E+08	2.15E+08	2.15E+08	2.15E+08	2.15E+08	2.15E+08
East passage I ST	2.09E+08	2.09E+08	2.09E+08	2.09E+08	2.09E+08	2.09E+08	2.09E+08	2.09E+08	2.09E+08
23 Bridge Street SWO	2.04E+08	1.71E+07	3.11E+07	2.28E+07	2.29E+07	3.12E+07	2.29E+07	2.30E+07	4.82E+07

SWO	Base			Development			Solution		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
River Carrigtwohill Wet	2.03E+08	1.99E+08	1.95E+08	2.03E+08	1.99E+08	1.95E+08	2.03E+08	1.99E+08	1.95E+08
Ursuline Convent SWO	1.94E+08	3.31E+07	5.61E+07						
River Shournagh Dry Lower	1.82E+08	1.87E+08	1.87E+08	1.82E+08	1.87E+08	1.87E+08	1.82E+08	1.87E+08	1.87E+08
Tivoli PS EO SWO	1.69E+08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.03E-02
21 Fever Hospital Steps SWO	1.67E+08	9.93E+03	1.54E+04	2.08E+04	1.52E+04	1.27E+04	1.92E+04	1.60E+04	1.01E+06
41 Mary Street SWO	1.63E+08	1.33E+05	2.12E+05						
22 Hardwick Street SWO	1.48E+08	1.75E+06	3.27E+06	2.19E+06	1.75E+06	3.27E+06	2.19E+06	1.72E+06	6.63E+06
44 Keysers Hill SWO	1.18E+08	1.50E+07	2.56E+07	1.94E+07	2.07E+07	2.51E+07	1.94E+07	2.05E+07	3.76E+07
Dripsey WwTP Inlet SWO	1.06E+08	1.25E+08	1.62E+08	1.15E+08	1.25E+08	1.62E+08			1.60E+08
River Bride Lee Dry Lower	1.05E+08	1.05E+08	1.04E+08	1.05E+08	1.05E+08	1.04E+08	1.05E+08	1.05E+08	1.04E+08
Cloghroe WwPS SWO	1.01E+08	4.97E+08	6.32E+08	4.84E+08	4.97E+08	6.32E+08	9.13E+07	1.11E+08	2.46E+08
Powdermill WwPS SWO	1.01E+08	1.07E+08	1.49E+08	1.01E+08	1.49E+08	1.49E+08	2.06E+07	4.56E+07	7.34E+07
Convent Avenue SWO	9.52E+07	1.05E+06	1.66E+06						
Assumption Road SWO	7.98E+07	1.20E+07	2.15E+07	8.86E+06	1.18E+07	2.14E+07	8.86E+06	1.18E+07	3.36E+07
River Shournagh Dry Upper	7.82E+07	8.02E+07	8.00E+07	7.82E+07	8.02E+07	8.00E+07	7.82E+07	8.02E+07	8.00E+07
04 Wyse Hill SWO	6.57E+07	2.39E+06	3.94E+06	2.48E+06	2.39E+06	3.96E+06	2.46E+06	2.44E+06	8.60E+06
Cathedral Walk SWO	6.13E+07	4.07E+06	6.56E+06	5.51E+06	4.65E+06	6.56E+06	5.51E+06	4.79E+06	1.13E+07
COBH Dockyard SWO	6.06E+07	5.49E+07	1.15E+08	6.06E+07	1.15E+08	1.15E+08	2.82E+08	4.30E+08	5.26E+08
43 Barrack Street SWO	5.94E+07	4.69E+06	7.90E+06	6.31E+06	6.25E+06	7.87E+06	6.30E+06	6.38E+06	1.18E+07
River Carrigtwohill Dry	5.08E+07	4.96E+07	4.88E+07	5.08E+07	4.96E+07	4.88E+07	5.08E+07	4.96E+07	4.88E+07
River Bride Lee Dry Upper	4.52E+07	4.49E+07	4.44E+07	4.52E+07	4.49E+07	4.44E+07	4.52E+07	4.49E+07	4.44E+07
07 John Redmond Street SWO	4.23E+07	1.42E+05	1.49E+05	1.51E+05	1.42E+05	1.49E+05	1.51E+05	1.45E+05	5.79E+05
Dwyers Road PS SWO	4.17E+07	5.24E+07	6.03E+07	4.59E+07	5.00E+07	6.16E+07	2.79E+08	3.54E+08	6.58E+08

SWO	Base			Development			Solution		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
Old Cobh Road WWPS SWO	4.15E+07	1.08E+08		4.63E+07	1.14E+08	5.69E+08	0.00E+00	0.00E+00	5.17E+06
COBH Dock Cottages SWO	3.99E+07	0.00E+00	5.13E+05	3.99E+07	5.13E+05	5.13E+05	0.00E+00	0.00E+00	0.00E+00
Anglesea Road 1 SWO	3.96E+07								
Leesdale WwPS SWO	3.78E+07	4.69E+07	4.83E+07	3.78E+07	4.83E+07	4.83E+07	3.19E+07	4.68E+07	4.78E+07
Fountainstown 3 ST	3.32E+07	3.32E+07	3.32E+07	3.32E+07	3.32E+07	3.32E+07	3.32E+07	3.32E+07	3.32E+07
Greenhills WwPS SWO	3.25E+07								
Great Wm O'Brien Street SWO	3.25E+07								
Popes Road SWO	3.20E+07	4.39E+06	5.89E+06	4.40E+06	3.59E+06	5.90E+06	4.39E+06	3.71E+06	1.16E+07
64 Convent Road SWO	3.05E+07	5.59E+06	1.01E+07						
18 Thomas Davis Street SWO	2.87E+07	3.68E+06	6.11E+06	4.38E+06	4.13E+06	5.85E+06	4.33E+06	4.08E+06	1.10E+07
North Channel L ST	2.74E+07	2.74E+07	2.74E+07	2.74E+07	2.74E+07	2.74E+07	2.74E+07	2.74E+07	2.74E+07
Fountainstown 4 ST	2.74E+07	2.74E+07	2.74E+07	2.74E+07	2.74E+07	2.74E+07	2.74E+07	2.74E+07	2.74E+07
River Bride Dry	2.69E+07	2.67E+07	2.64E+07	2.69E+07	2.67E+07	2.64E+07	2.69E+07	2.67E+07	2.64E+07
North Cobh WwTP	2.62E+07	2.62E+07	2.62E+07	2.62E+07	2.62E+07	2.62E+07	2.62E+07	2.62E+07	2.62E+07
Old Yoghal Road Oakwood PS Beechwood Court PS SWO	2.50E+07	2.91E+07	3.61E+07	2.58E+07	2.93E+07	3.60E+07	2.65E+07	2.93E+07	3.58E+07
30 Silversprings Lane SWO	2.00E+07	7.05E+08	1.29E+09						
Ballinacurra No 2 PS SWO	1.88E+07	4.71E+07	5.68E+07	1.81E+07	4.61E+07	5.63E+07	2.04E+07	4.21E+07	5.41E+07
North channel A ST	1.84E+07	1.84E+07	1.84E+07	1.84E+07	1.84E+07	1.84E+07	1.84E+07	1.84E+07	1.84E+07
COBH Station Car Park SWO	1.71E+07	1.56E+07	3.90E+07	1.71E+07	3.90E+07	3.90E+07	4.35E+07	5.30E+07	6.09E+07
South Great Island G ST	1.71E+07	1.71E+07	1.71E+07	1.71E+07	1.71E+07	1.71E+07	1.71E+07	1.71E+07	1.71E+07
South Great Island A ST	1.53E+07	1.53E+07	1.53E+07	1.53E+07	1.53E+07	1.53E+07	1.53E+07	1.53E+07	1.53E+07
East Passage C ST	1.43E+07	1.43E+07	1.43E+07	1.43E+07	1.43E+07	1.43E+07	1.43E+07	1.43E+07	1.43E+07
CARG Crosshaven Road SWO	1.43E+07	1.33E+07	4.84E+07	1.43E+07	4.84E+07	4.84E+07	3.25E+07	4.79E+07	5.49E+07

SWO	Base			Development			Solution		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
Church Hill SWO	1.32E+07	1.93E+07	1.90E+07	1.32E+07	1.90E+07	1.90E+07	1.06E+07	1.79E+07	1.76E+07
Elm Road SWO	1.25E+07	2.63E+07		1.30E+07	2.71E+07	2.88E+07	1.30E+07	2.72E+07	2.88E+07
MONK Monkstown SWO	1.22E+07	1.52E+07	4.13E+07	1.22E+07	4.13E+07	4.13E+07	1.71E+07	4.38E+07	
Church View 2 SWO	1.09E+07	1.43E+07	1.54E+07	1.09E+07	1.54E+07	1.54E+07	8.92E+06	1.42E+07	1.51E+07
RNSY Ringaskiddy Village SWO	1.04E+07	9.95E+06	3.50E+07	1.04E+07	3.50E+07	3.50E+07	2.97E+07	4.79E+07	6.06E+07
High Street SWO	9.62E+06	1.28E+05	7.27E+04	4.99E+04	1.07E+05	3.76E+04	0.00E+00	0.00E+00	6.03E+02
South Great Island F ST	9.03E+06	9.03E+06	9.03E+06	9.03E+06	9.03E+06	9.03E+06	9.03E+06	9.03E+06	9.03E+06
Mahon North PSEO SWO	8.72E+06	3.28E-01	4.49E-01	4.66E-01	3.65E-01	4.70E-01	4.19E-01	7.03E-01	1.39E+00
North Channel P ST	8.10E+06	8.10E+06	8.10E+06	8.10E+06	8.10E+06	8.10E+06	8.10E+06	8.10E+06	8.10E+06
Bessborough WwPS SWO	7.24E+06	6.37E+06	1.15E+07	1.82E+06	6.61E+06	1.15E+07	1.82E+06	6.62E+06	1.57E+07
North Channel I ST	7.16E+06	7.16E+06	7.16E+06	7.16E+06	7.16E+06	7.16E+06	7.16E+06	7.16E+06	7.16E+06
North Channel Q ST	7.16E+06	7.16E+06	7.16E+06	7.16E+06	7.16E+06	7.16E+06	7.16E+06	7.16E+06	7.16E+06
North Channel J ST	7.16E+06	7.16E+06	7.16E+06	7.16E+06	7.16E+06	7.16E+06	7.16E+06	7.16E+06	7.16E+06
East passage H ST	7.16E+06	7.16E+06	7.16E+06	7.16E+06	7.16E+06	7.16E+06	7.16E+06	7.16E+06	7.16E+06
Jn Dunbar ST SWO	6.84E+06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
08 Upper John Street SWO	6.63E+06	1.79E+05	1.90E+05	1.96E+05	1.80E+05	1.90E+05	1.95E+05	1.91E+05	7.59E+05
Crosses Green PS No 2 SWO	6.53E+06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
COBH Rushbrooke SWO	6.33E+06	3.03E+06	6.23E+06	6.33E+06	6.23E+06	6.23E+06	4.57E+06	7.45E+06	
North Cobh WwTP SWO	5.60E+06	7.80E+07	1.62E+08	5.60E+06	1.62E+08	1.62E+08	6.50E+06	1.64E+08	2.21E+08
Railway Yard WwPS SWO	5.56E+06	9.36E+04	9.61E+04	9.40E+04	9.36E+04	9.61E+04	9.42E+04	9.45E+04	1.39E+05
29 Trafalgar Hill SWO	5.42E+06			2.42E-02	2.40E-02	5.22E-02	0.00E+00	1.19E-01	1.69E-01
Anglesea Road 2 SWO	4.78E+06								
Fitzpatricks PS 1 SWO	3.81E+06			1.67E+07	2.99E+07	3.84E+07	1.26E+07	2.97E+07	7.11E+07

SWO	Base			Development			Solution		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
Eastgate PS SWO	2.53E+06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
GLEN Glenbrook SWO	1.81E+06	2.45E+06	3.24E+06	1.81E+06	3.24E+06	3.24E+06	2.20E+06	4.77E+06	4.70E+06
CARG Church Road SWO	1.73E+06	1.10E+07	3.71E+07	1.73E+06	3.71E+07	3.71E+07	0.00E+00	1.38E+05	1.04E+07
City Printers PS SWO	1.71E+06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PSWT Passage West SWO	1.52E+06	3.39E+06	3.45E+06	1.52E+06	3.45E+06	3.45E+06	1.50E+06	3.79E+06	3.64E+06
Glencurrig PS SWO	1.31E+06								
Roxboro Housing Estate PS SWO	1.04E+06	1.37E+06	1.42E+06	1.13E+06	1.36E+06	1.42E+06	1.13E+06	1.40E+06	1.42E+06
Owenacurra 2 ST	9.34E+05	9.34E+05	9.34E+05	9.34E+05	9.34E+05	9.34E+05	9.34E+05	9.34E+05	9.34E+05
North Channel H ST	9.34E+05	9.34E+05	9.34E+05	9.34E+05	9.34E+05	9.34E+05	9.34E+05	9.34E+05	9.34E+05
Cois Muileann WwPS SWO	9.07E+05	1.94E+06	1.79E+06	9.42E+05	1.94E+06	1.79E+06	9.74E+05	2.01E+06	
Environment Building WwPS SWO	9.04E+05	2.13E+06	2.00E+06	9.27E+05	2.13E+06	2.00E+06			
PSWT Cork Road SWO	7.34E+05	1.61E+06	3.54E+07	7.34E+05	3.54E+07	3.54E+07	6.70E+05	1.74E+06	3.86E+07
Donscourt PS SWO	6.44E+05	5.62E+05	8.74E+05	8.81E+05	8.64E+05	7.17E+05	8.56E+05	8.47E+05	1.39E+06
Lower Glanmire Road No 112 N8 SWO	4.93E+05	1.20E+06	1.45E+06						
Eastgate WwPS SWO	4.33E+05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cloyne Riverside WwPS SWO	2.86E+05	9.24E+05	7.72E+05	2.68E+05	9.24E+05	7.72E+05			
Crosses Green PS SWO	2.70E+05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Woodhaven PS EO SWO	2.35E+05	1.99E+05	3.11E+05	3.11E+05	3.05E+05	2.57E+05	3.02E+05	0.00E+00	0.00E+00
24 York Street SWO	2.25E+05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
The Rock PS SWO	1.65E+05	2.19E+05	2.49E+05	1.83E+05	2.00E+05	2.37E+05	1.78E+05	2.09E+05	2.34E+05
Oakwood PS SWO	3.93E+04	3.32E+04	4.55E+04	3.94E+04	3.72E+04	4.91E+04	4.26E+04	3.95E+04	4.84E+04
Church View 1 SWO	3.83E+04	4.42E+04	4.47E+04	3.83E+04	4.47E+04	4.47E+04	3.46E+04	2.74E+04	2.88E+04
Riverview Estate 1 (Dual MH) SWO	3.16E+04	2.71E+04	4.04E+04	4.03E+04	4.04E+04	3.36E+04	3.93E+04	3.84E+04	6.08E+04

SWO	Base			Development			Solution		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
Roxboro Mews PS SWO	2.43E+04	2.44E+04	2.76E+04	2.61E+04	2.45E+04	2.70E+04	2.75E+04	2.62E+04	2.67E+04
Bellevue PSEO SWO	6.83E+03	3.25E+03	8.33E+03	1.16E+04	1.15E+04	1.29E+03	0.00E+00	0.00E+00	1.36E+03
Lower Glanmire Road SWO	2.83E+03	2.17E+03	3.92E+03		3.37E+03	3.53E+03	3.38E+03	3.32E+03	5.89E+03
Wallingstown PS SWO	8.31E+01	1.16E+02	2.80E+02	1.50E+02	2.04E+02	2.08E+02	1.32E+02	9.01E+01	1.69E+02
27 Grattan Hill SWO	5.09E+01	8.54E+05	1.60E+06	8.49E+05	8.52E+05	1.59E+06	4.10E+05	3.92E+05	1.60E+06
Kingsley PS SWO	1.27E+01	3.69E+06	6.65E+06	3.50E+06	3.70E+06	6.71E+06	3.48E+06	3.76E+06	1.02E+07
28 Beales Hill SWO	1.79E-01	4.14E+05	4.14E+05	4.16E+05	4.14E+05	4.14E+05	4.15E+05	4.19E+05	1.12E+06
Barryscourt WWPS EO SWO	0.00E+00	0.00E+00		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Stratton Pines PS SWO	0.00E+00	1.26E+05	1.34E+05	1.44E+05	1.49E+05	1.30E+05	1.29E+05	1.32E+05	1.54E+05
Cow's Cross WwPS SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
East Cork Oil Broomfield West Midleton (WP (W) 02/87) Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dept of Defence LOGS HQ Naval Base Haulbowline WwTP 1 Emission Point 1 Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Recordati Ireland Limited Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Curraheen PS 1 SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
XHAV Carpark PS 1 SWO	0.00E+00	3.26E+05	8.78E+07	0.00E+00	8.78E+07	8.78E+07	0.00E+00	0.00E+00	0.00E+00
Little Island Interchange PS SWO	0.00E+00	9.80E+06	3.01E+07	9.46E+06	1.96E+07	2.50E+07	1.05E+07	2.03E+07	6.08E+07
CARG Dunnes network overflow SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Electricity Supply Board Aghada 4 Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
The Island Crematorium Ltd Mocklerstown House Clerihan Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Halting Site Carrigrohane PS EO SWO	0.00E+00			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Riverview Estate (SW68737602) (Dual MH) SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Spike Island Development Ltd Spike Island Cork Harbour Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BioMarin International Ltd Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

SWO	Base			Development			Solution		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
Trabolgan Holiday Centre Trabolgan Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Electricity Supply Board Aghada 1 Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RNSY Coolmore Cross SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Flaxfort Road PS SWO	0.00E+00	1.34E+08	3.09E+08						
Cloyne Dun Orga SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00			
Sundays Well PS SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Irving Oil Whitegate Refinery Limited Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Thermo Fisher Scientific Cork Limited Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
IDA No1 WWPS ESO SWO	0.00E+00	0.00E+00		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hovione Limited Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cois Fota Owners Management Co Ltd Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Roadstone Ltd Carrigtwohill Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pfizer Ireland Pharmaceuticals Ringaskiddy Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Curraheen PS 2 SWO	0.00E+00			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Curraheen (Dog Track) PS SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dairygold TINE Ltd Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Church Lane SWO	0.00E+00	0.00E+00		0.00E+00	8.13E-03	0.00E+00	0.00E+00	7.76E-03	0.00E+00
Lynch's Quay WwPS SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
XHAV The Glen PS SWO	0.00E+00	0.00E+00	6.09E+06	0.00E+00	6.09E+06	6.09E+06	6.31E+05	2.02E+08	3.47E+08
Killeens WwTP Sump Pump SWO	0.00E+00			0.00E+00					
Cork Ring Bandon Road WwPS SWO	0.00E+00								
Janssen Sciences Ireland UC Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Minane Bridge SW01 SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00			

SWO	Base			Development			Solution		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
Dept of Defence LOGS HQ Naval Base Haulbowline WwTP 5 Emission Point 2 Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Novartis Ringaskiddy Limited 1 Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Marinochem Limited Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Novartis Ringaskiddy Limited 2 Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ballyvolane WwPS SWO	0.00E+00			0.00E+00	3.60E+07	4.87E+07	0.00E+00	0.00E+00	3.14E+06
Bord Gais Energy Ltd Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MONK Coast Road SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
SW67724106 SWO	0.00E+00			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Irish Distillers Limited Ind	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ballick No 3 EO SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-01	1.00E+05	0.00E+00	0.00E+00
CARG Old Water Park SWO	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Gillabbey Pump Station Overflow SWO	0.00E+00	0.00E+00	0.00E+00						
59 Rosebank 1 SWO								3.32E+07	2.28E+07
Ursuline Convent 1 SWO				4.36E+07	4.47E+07	5.54E+07	4.37E+07	4.43E+07	8.38E+07
Ursuline Convent 2 SWO				4.36E+07	4.47E+07	5.54E+07	4.36E+07	4.42E+07	8.38E+07
Summerhill South 2 SWO				0.00E+00	0.00E+00	0.00E+00		0.00E+00	0.00E+00
Castle Avenue PS SWO		8.66E-02	1.92E-01	2.34E-02	5.74E-02	1.50E-01	5.87E-02	9.45E-02	1.98E-01
30 Silversprings Lane 2 SWO				9.64E+08	1.07E+09	1.08E+09	6.99E+07	6.98E+07	1.73E+08
Summerhill South SWO 1							0.00E+00		
05 Rock Cottages North Mall 1 SWO				7.92E+08	9.51E+08	1.01E+09	7.88E+08	9.37E+08	1.97E+09
48 Gaol Walk 2 SWO				9.42E+04	7.58E+04	8.52E+04	9.37E+04	8.98E+04	1.04E+06
05 Rock Cottages North Mall 2 SWO				7.93E+08	9.53E+08	1.02E+09	7.89E+08	9.39E+08	1.98E+09
61 Douglas Hall Lawn 1 SWO								5.59E+07	5.74E+07

SWO	Base			Development			Solution		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
Wilton PS SWO		1.16E+02	3.04E+02	1.03E+02	2.45E+02	2.50E+02	9.22E+01	7.90E+01	7.35E+01
Glanmire PS CSO SWO		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Horgans Quay CSO 2 SWO				3.68E+06	4.23E+09	8.54E+09	5.02E+07	6.50E+07	1.47E+10
Whitegate WwPS SWO		1.65E+09	2.19E+09	2.69E+08	1.65E+09	2.19E+09	1.97E+08	9.92E+07	
Flaxfort Road PS 1 SWO				0.00E+00	3.98E+06	4.86E+07	0.00E+00	5.70E+06	6.92E+07
06 Shandon Street 1 SWO				1.21E+07	1.13E+07	1.51E+07	1.23E+07	1.17E+07	2.52E+07
Summerhill South SWO 3							2.37E+07		
Convent Avenue 1 SWO				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Summerhill South 1 SWO				0.00E+00	0.00E+00	0.00E+00		0.00E+00	0.00E+00
41 Mary Street 2 SWO				2.34E+05	2.00E+05	2.52E+05	2.32E+05	2.04E+05	4.81E+05
Gillabbey Pump Station Overflow 1 SWO				0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.57E-02	0.00E+00
Dripsey WwTP Inlet 1 SWO							1.31E+08	8.12E+07	6.64E+06
Mahon South PS SWO		7.19E+10	1.23E+11	2.20E+06	3.87E+06	6.19E+06	2.28E+06	3.33E+06	7.71E+06
06 Shandon Street 2 SWO				5.56E+07	5.44E+07	5.89E+07	2.49E+07	2.44E+07	1.06E+08
Lower Aghada WwPS SWO		3.44E+07	5.37E+07	4.11E+05	3.44E+07	5.37E+07			2.44E+08
Convent Avenue 2 SWO				1.65E+06	1.64E+06	1.37E+06	1.60E+06	1.58E+06	2.62E+06
48 Gaol Walk 1 SWO				2.91E+07	2.83E+07	3.63E+07	2.91E+07	2.86E+07	5.56E+07
Horgans Quay CSO 1 SWO				3.46E+03	8.88E+06	1.35E+08	0.00E+00	4.89E+06	8.27E+06
Lower Glanmire Road No.112, N8 SWO				1.34E+06		1.37E+06	7.80E+05	7.86E+05	2.69E+06
Summerhill South 3 SWO				6.38E+05	6.05E+05	5.17E+05		5.75E+05	3.90E+07
61 Douglas Hall Lawn 2 SWO								5.59E+07	5.74E+07
Clover Lawn SWO		6.56E+08	1.56E+09	1.08E+09	1.24E+09	1.31E+09	1.05E+09	1.21E+09	2.58E+09
Flaxfort Road PS 2 SWO				0.00E+00	5.06E+06	4.53E+07	0.00E+00	6.74E+06	7.04E+07

SWO	Base			Development			Solution		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
64 Convent Road 2 SWO				9.13E+06	9.12E+06	8.45E+06	2.65E+06	2.61E+06	1.64E+07
Whitegate WwTP SWO							8.90E+07	7.97E+07	1.50E+07
Gillabbey Pump Station Overflow 2 SWO				1.35E+07	1.34E+07	1.38E+07	0.00E+00	0.00E+00	2.67E+07
59 Rosebank 2 SWO								3.58E+07	2.40E+07
41 Mary Street 1 SWO				1.84E+05	1.50E+05	2.12E+05	1.84E+05	1.55E+05	4.01E+05
30 Silversprings Lane 1 SWO				9.59E+08	1.06E+09	1.07E+09	6.36E+07	6.35E+07	1.63E+08
Summerhill South SWO 2							0.00E+00		
51 Skehard Road SWO				7.13E+09	7.39E+09	6.57E+09	6.92E+09	7.11E+09	1.24E+10
64 Convent Road 1 SWO				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Old Comminutor Chamber CSO Ronayne's Court SWO		1.81E+08	9.85E+08	1.06E+08	5.24E+08	7.16E+08	1.03E+08	4.70E+08	1.52E+09
Rostellan SW002 SWO		1.09E+08	1.48E+08	5.22E+06	1.09E+08	1.48E+08	4.17E+07	6.43E+07	1.00E+08
R843 SWO		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dripsey WwTP Inlet 2 SWO							1.15E+08	9.79E+07	7.17E+07

APPENDIX B

Results

B.1 MODEL OUTPUT TABLES

B.1.1 BW Source Apportionment

Table B-1 EC Source Apportionment for Fountainstown BW

	Base			Development			Solution		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
95th Percentile	147	150	150	147	145	150	149	152	197
River Minane Wet	2.8	2.7	2.9	2.8	2.7	2.9	2.8	2.8	7.3
River Minane Dry	0.7	0.7	0.8	0.7	0.7	0.8	0.7	0.7	1.9
River Ringabella Wet	73.1	73.0	72.9	73.1	73.0	72.9	73.1	73.0	68.8
River Ringabella Dry	18.3	18.2	18.2	18.3	18.3	18.2	18.3	18.3	17.2
Fountainstown 1 ST	4.0	4.1	4.0	4.0	4.1	4.0	3.9	4.0	3.6
Other	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2

Table B-2 IE Source Apportionment for Fountainstown BW

	Base			Development			Solution		
	2030	2055	2080	2030	2055	2080	2030	2055	2080
95th Percentile	28	28	28	28	27	28	28	28	34
River Minane Wet	2.1	2.1	2.4	2.1	2.0	2.5	2.1	2.2	6.2
River Minane Dry	0.5	0.5	0.6	0.5	0.5	0.6	0.5	0.5	1.6
River Ringabella Wet	71.0	70.9	71.2	71.0	71.0	71.1	71.2	71.0	68.9
River Ringabella Dry	17.8	17.7	17.8	17.8	17.8	17.8	17.8	17.8	17.2
Fountainstown 1 ST	8.1	8.1	7.5	8.1	8.1	7.4	7.9	8.0	5.5
Other	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.6